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M E D I C A L C O M M E N T A R I E S

FOR THE YEAR M.DCC.XCI.

EXHIBITING A CONCISE VIEW OF THE
LATEST AND MOST IMPORTANT DISCOVERIES
IN MEDICINE AND MEDICAL PHILOSOPHY,

COLLECTED AND PUBLISHED BY
ANDREW DUNCAN, M.D.F.R.&A.S.ED.

PHYSICIAN TO HIS ROYAL HIGHNESS THE PRINCE OF WALES
FOR SCOTLAND,
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IN THE UNIVERSITY OF EDINBURGH.

Neglecta reducit, sparsa colligit, utilia selegit, necessaria ostendit, sic utile.

Baglivius.

DECADE SECOND.

VOL. VI.

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M.DCC.XCII.



T O

DR SAMUEL FOART SIMMONS,

PHYSICIAN IN LONDON,

As a public Testimony

Of sincere Gratitude

For many disinterested Acts of Friendship,

And of unfeigned Esteem

For many meritorious exertions of Genius,

THIS VOLUME OF

MEDICAL COMMENTARIES

Is gratefully inscribed,

By his affectionate Friend,

ANDREW DUNCAN.

————— *Ille potens sui*
Lætusque deget, cui licet in diem
Dixisse vixi.

HORAT.

1871

THE AMERICAN

REVIEW

OF

AMERICAN

LITERATURE

AND

ART

THE

AMERICAN

REVIEW

OF

AMERICAN

LITERATURE

AND

ART

P R E F A C E.

THE discerning Reader, in perusing the analysis of books which the present volume contains, will probably be able to discover, in particular articles, a style somewhat different from what he has been accustomed to meet with in former volumes of this work. In compiling these, I was indeed often indebted to ingenious and learned friends, not only for original observations, but also for an account of new books; but, in the present volume, I have been aided by a younger assistant, and one with whom I am still more nearly connected, my own son. Notwithstanding his youth, and want of experience in literary composition, I yet trust, that he has not failed in retaining

the sense of the Authors whose writings he has analyzed: And, if the language which he employs should sometimes appear deficient in accuracy or perspicuity, the indulgent Reader will, I hope, permit me to offer for him, the apology which the illustrious Haller made for his son, “ *Condonandum aliquid juveni octodecim annorum.*”

AMONG the original observations contained in the present volume, there are some which may perhaps appear extraordinary; and I will not pretend to affirm, that they may not, in some particulars, be founded on mistaken observation. No one, who undertakes the office of a Collector, can be supposed to vouch for the truth of what is merely communicated to him by others. The credit due to such communications, must, in every instance, depend on the veracity and discernment of the observer. But every

very one, extensively engaged in the practice of the healing art, must have frequently met with occurrences, so unexpected and singular, that he will not rashly question the authority of others, without some good reason.

COMMUNICATIONS intended for this Work, which cannot be directly transmitted to Edinburgh, may, as was mentioned in the last volume, be addressed to the care of Messrs Robinsons, booksellers in London.

EDINBURGH, }
Dec. 1. 1791. }

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M E D I C A L
COMMENTARIES,

FOR THE YEAR 1791.

VOL. VI. DECADE II.

SECT. I.

Account of New Books.

I.

*De Veneni Animalium rabidorum Natura, ejus-
que Medela, Dissertatio. Auctore Frederico
Anselmo Brevel. M. D. 4to, Lipsiæ.*

THE ingenious author of the treatise before us, sets out with observing, that it may seem superfluous in him, to add any thing on a subject already treated of by more than three hundred writers. But he remarks, that very few of these have either attempted to explain the nature of this poison, or to ex-

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plore a rational method of cure. And he adds, that since the symptoms induced evidently arise from a peculiar poison, either introduced into a body in a sound condition, from one in a state of rabies, or generated from some peculiar acrimony in the animal body itself, the cause of rabies can never be properly understood, till the nature of this poison be explained. With the poison, however, producing Rabies Canina, our author observes, that no experiments have been made, with which he is acquainted; nor has he himself been able, on this subject, to overcome the difficulties which presented themselves to others. But he thinks, that from a comparison of this poison with those on which numerous experiments have been lately made by the celebrated Fontana, some knowledge of its nature may be derived.

From a comparison of the effects of the poison of rabid animals, with those which Fontana has shown to arise from the poison of the Viper, of the *Laurocerasus*, and of the *Ticunas*, as it is called, he concludes, that in their nature they are very analogous. And he even thinks, that there would be no great
error

error in viewing them as differing only in the violence and celerity of their effects. He considers those parts of the poison in which the seeds of destruction lurk, as being of a caustic nature; and therefore, he thinks that the attention of the medical practitioner should be principally directed, to blunt this causticity, and by this means mitigate its effects, or render it altogether innocent to the body. An attempt to establish this doctrine, is the object of the treatise before us.

In the first part, when treating of the nature of the poison of rabid animals, he begins by considering what causticity is. He considers phlogiston, and air deprived of phlogiston, or pure air, as being principles which, both in chemical operations and in the human body, have very great influence. Though many controversies have of late taken place with respect to their nature, yet he imagines there can be no doubt, that a very strong affinity takes place between them, in consequence of which, wherever they meet, they mutually attract each other, at length forming new bodies by their union. This mutual affinity is, he thinks, much increased, when pure air has before

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been

been united to calcareous bodies. Hence, bodies saturated with pure air, may be said to possess causticity, or, in other words, the faculty of attracting phlogiston with great violence. These bodies, therefore, may, he imagines, be termed caustic, which abound in pure air, and at the same time are almost, if not altogether, deprived of phlogiston.

To transfer this idea of causticity to the human body, it is, he thinks, manifest, that whatever is capable of attracting phlogiston, when applied either to its solids or fluids, must destroy them in a greater or less degree, in proportion to the attachment which that phlogiston has with their other constituent parts.

When the nature of a caustic is such, that it cannot be dissolved by the fluids, and absorbed so as to be diffused through the whole animal machine, its effects are necessarily confined to the part to which it is applied. There, inflammation is excited, and pus afterwards generated, by which the caustic is involved, and any farther mischief from it prevented. But the case is otherwise, when a caustic body is dissolved in the fluids. For then, its influence is extended over the whole body, unless,
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by the access of some particular humour, which in certain cases happens, its nature be somewhat changed. In this manner, it may, even for a long time, be present in the body, without producing any deliterious effect; but, in this case, it still lurks in the fluids, and only waits for a solution of this union, to exert more pernicious effects with greater violence.

This doctrine, he thinks, agrees admirably with the effects of the poison of rabid animals, which, it is certain, will often long remain latent in the body of a person who has been bit; but, when evolved by anger, terror, or any other cause, they give rise to a most dreadful disease. But, in farther confirmation of this doctrine, he next proceeds to shew, that the poison of a rabid animal is really of a caustic nature. It is, he observes, well known, that rabies may either arise spontaneously, or as a symptom of other diseases; or, finally, as communicated by the bite of a rabid animal.

The first of these three species of rabies, is, he allows, much more rare with the human species, than with dogs, foxes, wolves, or cats. At the same time, examples of its occurrence, even with them, are not wanting.

Both in men and in other animals, spontaneous rabies has, he thinks, chiefly appeared from intense degrees of heat and cold, and particularly from sudden successions of these. Hence, he imagines, we may infer, that it depends upon a greater causticity of the humours of the animal body. For, in cold weather, the atmospheric air is more pure; and transpiration being impeded or suppressed, this pure air, uniting with those serous fluids which ought to have been expelled by insensible perspiration, corrupts them, and imparts a causticity to them. How far, however, such a corruption of the humours can arise from the influence of cold, will, we apprehend, with many be a matter of doubt. But, were the whole of our author's reasoning on this subject well founded, it would, we think, necessarily follow, that spontaneous rabies should be a much more frequent disease than is really the case.

He proceeds, however, to shew, that a similar effect will arise also from long continued summer heat. For, by excessive heat, the atmospheric air is, he believes, so changed, as, even of itself, to operate as a caustic stimulus

to

to the human body. Nature, indeed, may, for some time, counteract this, by copious sweating. But the serous fluids being exhausted, the caustic fluid will act with its full violence, particularly when there is either no water to quench excessive thirst, or, at the utmost, putrid and corrupted water.

In a similar manner, he is inclined to believe, that a sudden suppression of perspiration, and putrid or corrupted food, particularly from the animal kingdom, will so change the fluids of the body, that they may become highly caustic, and even give rise to Rabies Canina. He admits, however, that every sudden suppression of perspiration by no means gives rise to rabies. Hence he finds it necessary to suppose, that there must be present some peculiar disposition of the body; such, for example, as a singular acrimony of the bile, for the production of the disease from this cause.

In farther confirmation of the doctrine of causticity, Dr Brevel next endeavours, on this ground, to explain the more remarkable symptoms of the disease. And, in the *first* place, he observes, that the pain from the bite of a

rabid animal, differs somewhat from that arising from similar lacerated wounds. For, to the common pain arising from a solution of continuity, and proportioned to the sensibility of the part, there is superadded a peculiar pungent and burning pain, similar to that which arises from common caustics applied to the body. And a similar sensation is often also felt at the part formerly wounded, long after it has been closed by a firm cicatrix. He observes, that wounds inflicted by rabid animals, heal even sooner than similar wounds from other causes, which he ascribes to the causticity of the poison, producing a greater afflux of glutinous fluids to the part.

But it is not, he thinks, upon the solids of the body alone that this caustic matter exerts its influence: the fluids also, particularly the bile and saliva, are, he imagines, affected by it. From the caustic quality acquired by the saliva, many of the symptoms are, in his opinion, to be explained. From stimulating the secreting organs, a greater separation of this fluid takes place; and, from admixture with the air in respiration, it is collected at the mouth under the form of froth. From the retention

tion of caustic saliva in the mouth, arises a muscular contraction, resisting that extension which is necessary to deglutition. And he accounts for the greater inconvenience which ensues from attempts to swallow fluids than solids, from the pressure of the solids producing insensibility to the caustic stimulus, at least for the time. He considers this as a more rational explanation of the symptom of difficult deglutition, than that the dread of water arises from perturbation of mind alone.

Though patients subjected to rabies, by a sort of instinct as it were, avoid swallowing their saliva, yet a considerable quantity of it must necessarily make its way into the stomach, both with food and medicine, and there communicate its caustic stimulus to the succus gastricus. In the same manner, also, the secretion of bile is, he thinks, both increased and vitiated, and becomes the cause of many of the most distressing symptoms. Hence, he thinks, arises the sense of distressing heat at the scrobiculus cordis, the colic pains, the bilious vomitings, and the like; which, unless this acrid bile be either discharged by the efforts of nature or of art, in a very short space brings

brings a termination of life, under the most excruciating pains.

Having thus endeavoured to shew, from the peculiar sensation excited at the wound, from the change of the saliva, and from the effects of the bile, that several of the most remarkable phænomena of the disease are to be referred to the principle of causticity, he next proceeds to compare some other poisons, the causticity of which he considers as certain, with the poison of a rabid animal. The poison of the Viper, of the Ticunas, and the distilled water, or essential oil, obtained from the leaves of the *Laurocerasus*, agree so much with each other, that he views them as differing only in the degree of their effects. Of all these, he considers the poison of the viper, however, as approaching most nearly to that of the dog subjected to rabies. This poison, he observes, when introduced into wounds, excites a burning sense of pain, and renders the wound livid and black. The same, however, is, he asserts, also the case with the poison of the rabid dog. After the poison of the viper has been introduced into a wound, if all communication with other parts be cut off,

off, either by means of a ligature, or by the complete removal of the part, no dangerous consequences follow. In this, also, it agrees with the poison of the dog.

The bodies of those animals who are killed with the poison of the viper, shew, he tells us, phænomena similar to those dying from the bite of rabid animals; the blood of both being in a dissolved state; the bodies, on dissection, emitting a high degree of fætor; and red, livid, gangrenous spots appearing every where in great numbers. And, finally, he observes, that convulsions, nausea, and vomiting, with a large discharge of bile, equally affect animals bit by a viper and by a rabid dog; from which he infers, that the caustic stimulus of the poison, is, in both cases, equally the cause of the effusion of bile into the intestines and stomach.

After this comparison of these poisons, Dr Brevel next relates some experiments which he made, which serve, he thinks, to confirm his opinion respecting the causticity of rabid animals. As, from the experiments of Fontana, it appeared that the poison of the viper, excepting the circumstance of causticity, was
very

very similar to gum arabic, Dr Brevel wished to see, whether, by communicating causticity to a solution of this gum, he could produce the same consequences as Fontana had found to arise from the poison of the viper. With this intention, he poured a solution of gum-arabic, about the consistence of a syrup, upon quicklime. He passed threads, wetted with this solution, through the pectoral muscles of three chaffinches. The birds, in a short time, were thrown into convulsions, and died before evening. He applied, in the same manner, to several chaffinches, threads impregnated with putrid bile, which were so superficially introduced, that little or no blood was discharged from the wounds. But, in the space of four hours, all of them died violently convulsed.

With one bird he inflicted no wound, but applied a little of the putrid bile to its tongue. In this case, the poison seemed to act more slowly, but with the same effect; for, in the space of five hours, it died convulsed. He next tried the effect of putrid bile on a larger and more robust animal. He inserted into a recent skin wound, made on the leg of a middle-

dle-sized vigorous dog, two threads infected with putrid bile. In the space of an hour, the dog was seized with shiverings and slight convulsions, which lasted the whole day. The next day he was easier, and his appetite in some degree returned; but the wounds emitted a remarkable fetor. Though this experiment was not pushed farther, yet Dr Brevel thinks, that from a greater quantity of bile, more serious effects, and even rabies itself, may perhaps have been produced.

Dr Brevel next makes some comparison of the venereal poison with that of the mad dog. Heat, he observes, has great influence in evolving the venereal poison, as appears from syphilis, being a disease which originated in warm climates, and it has a similar effect on the poison of rabid animals. The causticity of the venereal poison clearly appears, he tells us, from the inflammation, exulceration, and pain which it occasions; while the venereal poison, as well as that of the mad dog, acts very powerfully on the salivary organs. And, finally, mercury, he tells us, is a powerful remedy against both.

After

After these observations on the theory of Rabies Canina, Dr Brevel next proceeds to make some remarks on the method of cure. He first considers what plan of treatment would naturally be suggested by his hypothesis concerning the nature of the poison of rabid animals; and then, from various observations on the remedies which, from former experience, have been found useful, he endeavours to shew in what manner they either counteract, destroy, or lessen the effects of causticity.

The first and principal care must be, that the poison should, as quickly as possible, be removed from the wound, or at least prevented from entering the circulation. Complete excision of the wounded part, or even amputation of the member, is certainly the most secure precaution in such cases. Where this is impracticable, scarifications, as deep as they can easily be made, are to be advised, conjoined with careful washing of the part, either with tepid water, or with alkaline lixivium, which, from its power of dissolving coagulable lymph, seems to be preferable. Recourse may also be had to burning the part; for which
purpose,

purpose, he considers washing with diluted vitriolic acid, as preferable to other practices; by which means the poison may be involved with coagulated lymph, and thus its absorption prevented.

After scarification and burning, he directs, that suppuration be by all means promoted. But, before having recourse to digestives, he directs, that a solution of mercury in the nitrous acid be applied to the part, which, while it does not act with the same violence as other caustic fluids, can be much more readily applied to the whole surface of the wound, than caustics in a solid state.

These are the practice which Dr Brevel recommends, for most completely and expeditiously expelling the poison from the body; and they are, what we think experience has demonstrated to be, the most successful. He condemns the practice of those who advise the application of oily and other lenient medicines, trusting the expulsion to the operation of nature alone. It may, however, be a question, whether this practice is not more consistent with the idea that the poison of rabies operates by causticity alone. For, were that the case, by
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the application of any caustic substance, the evil which we wish to avoid would necessarily be induced or augmented.

As Dr Brevel supposes, that bile effused in the duodenum, and rendered acrid, when gradually absorbed into the blood, evolves the activity of the latent poison, he concludes, that the external treatment is not alone to be trusted to. He advises, in the first place, that the alimentary canal should be freed from bile, by means of an emetic; and if, on account of the abundance of blood, the use of it should not seem to be safe, he directs that blood should be let. To this is to be superadded, an irritating glyster; and, after a few days, the emetic is to be repeated.

As a further mode of expelling the poison, he recommends also the use of sudorifics; and, with this intention, he directs the employment of the *Atropa belladonna*, premising, to its use, the employment of the tepid bath. He considers, as of nearly equal efficacy in answering this intention with the belladonna, large doses of opium and musk; but these, he tells us, require to be conjoined with purgatives;

as,

as, otherwise, they occasion a large effusion of bile in the duodenum.

But, although sudorifics be often proper in the winter ; yet, when rabies occurs in the summer, as, by accelerating the circulation, they assist the dissolution of fluids, to which there is at that time a tendency, they must be used with very great caution.

When manifest signs take place, of the poison having produced its effect in the body, recourse must be had to still more active remedies ; and, that these may be employed without hazard, it is first necessary that blood should be let. This evacuation, Dr Brevel thinks, should never be omitted from fear of weakening the patient ; for it is better that weakness should occur, which we have it afterwards in our power to combat by nutritious diet, than that the patient should fall a victim to the disease. When the hydrophobia has appeared, he advises that blood should be drawn, even to deliquium animi. He advises, also, glysters of water, impregnated with fixed air, or with hepatic air, to be frequently injected ; and, when the patient can swallow, he advises large doses of camphor, and of vi-

trilic acid, properly diluted. He recommends, also, that the throat should be covered externally with cloths wetted with a solution of opium.

After giving this account of the practice which he thinks most adviseable in cases of Rabies, he concludes with some observations on particular practices, with the intention of shewing how far they are explicable on the theory he has given of the nature of the poison of rabid animals, and of pointing out at what periods of the disease they may be employed with greatest advantage.

With regard to the use of scarifications, he remarks, that though these be of themselves highly beneficial, yet very great danger is to be dreaded from exposing them to the open air. In confirmation of this, he mentions some facts which have occurred to him; and he thinks it is to be explained from the quantity of pure or dephlogisticated air which the atmosphere contains, rendering the discharge from the wound more acrid and caustic.

While the use of venesection has been by some condemned, by others it has been highly extolled. It has been alleged, that, in those diseases,

diseases, in general, attended with violent spasms, blood-letting is of no use: but, to this, Dr Brevel thinks it a sufficient answer, that spasms arise from many different causes. In the beginning of the disease, he thinks, blood-letting is only to be had recourse to, when it is necessary as a preparation for an emetic; but, when the poison is once introduced into the circulating system, he considers it as a necessary means for discharging the caustic stimulus; and he mentions several cases in which very great benefit has been obtained, both from intentional and accidental loss of blood, at this period of the disease.

Great controversies have also taken place with regard to the propriety of employing bathing in this disease. As Dr Brevel thinks, that the bile has great influence in evolving and augmenting the activity of the poison, he concludes, that from the affection of the mind attending bathing, the hydrophobia will rather be accelerated than otherwise. He thinks, that cold bathing, in particular, is to be condemned, whether we consider the disease as of an inflammatory or spasmodic nature. And, to the reasons urged against it by Nu-

gent and others, he adds, that from the quantity of dephlogisticated air which the cold water contains, it must add to the causticity of the poison.

Warm bathing, he admits, is sometimes useful, from giving a determination to the surface. But since, by the heat of the bath, the blood is expanded, and a species of plethora formed, he thinks that blood-letting should always precede its use.

As some physicians hold the opinion, that rabies is a disease entirely of the spasmodic kind, and that danger is solely to be apprehended from the convulsions, they place their confidence wholly in the use of antispasmodic medicines. He supposes them to act in this disease in two ways: In the first place, by increasing the impetus of circulation, and afterwards by debilitating those powers which move the blood. On these principles, he thinks that the benefit derived from them in this disease may be explained; but he contends, that they are never to be trusted to alone, without the employment of other modes of cure.

He

He concludes this subject with some observations on the use of Mercury. This article has been, by some, highly extolled as an almost infallible specific; and he considers the similarity between the venereal virus, and that of rabies, as giving some countenance to this supposition; while it may also, he thinks, be inferred from the influence which both mercury and the poison of rabid animals have, in affecting the salivary glands. He is, however, far from considering it as a certain cure; and he tells us, that many cases have occurred, where, though given with the utmost attention, the disease has yet proved fatal. He is, however, far from denying, that its influence in rabies is very great, which he attributes to the large proportion of phlogiston it contains; but, on this account, he reckons it better that it should be employed in substance, than either in a state of solution or calcination. He thinks, that mercury is chiefly to be employed as the means of counteracting rabies, when wounds are made in the head, in such situations, that chirurgical assistance cannot be employed for the removal of the poison. But although, in the beginning of

the disease, large doses may be given with advantage ; yet he thinks, that after the poison clearly demonstrates its effects upon the system, mercury, by inducing salivation, and diminishing the strength of the patient, will prove rather hurtful than beneficial.

II.

A Treatise upon Gravel and upon Gout, in which the Sources of each are investigated, and effectual Means of preventing, or of removing these Diseases, recommended. 12mo, London.

THE diseases which are the subject of this treatise, as the ingenious author, who, for reasons best known to himself, has chosen to withhold his name from the public, observes, have long been ranked among the Opprobia Medicorum. Every attempt, therefore, to remove this reflection, even although not productive of the wished-for effect, may justly be considered as well deserving attention; and although we must own we are very doubtful, how far the means here recommended will be effectual, either in preventing or removing Gout and Gravel, yet we cannot help considering his essay as well meriting a

serious consideration from every medical practitioner.

He sets out by considering the matter of urinary concretions. He observes, that the concretions generated in the urinary passages, not only differ in size, figure, colour, texture, and specific gravity, but that, when cut into, they are found of a laminated structure; and that the several laminæ are sometimes very different in appearance. All the opinions, he observes, entertained with respect to their nature, prior to the experiments of Scheele and Bergman, were either erroneous, or, at the utmost, conjectural; but, from the result of their experiments, it appeared that urinary concretions, however different in colour and texture, are essentially the same; and that they are formed of a peculiar substance, which, on account of some of its properties, they consider as an acid. These concretions contain very little, if any, calcareous matter, the acid being blended merely with a portion of animal gelatinous matter. From several trials made by our author, the opinion of Scheele was strongly confirmed, particularly from the combination of this acid with magnesia,

sia, and with the pure earth of alum. This acid, however, appears to him not to be a simple element, but to be a compound body. But its acidity being demonstrated, it ought, he thinks, in chemical arrangements, to have a place among the acids; and, as forming the basis of urinary concretions, it may, he thinks, be termed the Concreting Acid, or the Acid of Calculi.

He next makes some observations on the state in which this matter is contained in the fluids of the body. By adding muriatic acid to clear urine, in the proportion of a dram to a quart, he demonstrated the presence of this acid in all urine. A redundancy of this concreting acid, producing any other separation in the urine than the common cloud, is to be considered as preternatural. It is, however, frequently met with under particular states of the system; and it is sometimes in so great quantity, that a deposition of particles takes place in the urinary passages, giving occasion to gravel and calculi. This may happen either from an affection of the vessels of the kidneys, predisposing to a greater secretion by them, or from a check being given to the secretion by
the

the emunctories in other parts. For thus, a preternatural quantity of the excrementitious matter of the blood shall be carried off with the urine. In such cases, in place of the usual cloud which arises from a small superfluity of acid, there would be that kind of sediment by which a considerable redundancy is indicated.

Besides this, as another cause of redundancy, he observes, that from an universal tendency to contraction in the emunctories, the acid may be retained in the vessels, so as to accumulate; and when, at last, they are relaxed, it will appear preternaturally redundant in the urine. And, lastly, he thinks, that in some cases there may be an actual production, in the system, of a greater quantity than usual of the concreting acid.

From these circumstances, occurring separately or together, there will be in the urine a redundancy of concreting acid; and this, he thinks, in certain cases, may perhaps arise to a sufficient height for the production of calculi and gravel. But he thinks, that the phenomena of urinary concretions, are, in the greater number of instances, to be accounted for,
from

from the introduction into the vessels of a foreign acid. For this foreign acid, secreted by the kidneys, and mingling with the urine, will precipitate the concreting acid which it contains, though united with lime, with animal earth, or with volatile alkali. To this opinion, of calculi being generated by the introduction of other acids, it may, he observes, seem to be an objection, that gravel is one of those diseases which is often transmitted by parents to their offspring. But he observes, that the acids of wine and punch are not more active in producing gravel, than those generated by fermentation in the stomach; and a tendency to acidity, from weakness in the digestive organs, is, he adds, in the most pointed degree, hereditary. In this manner, then, he supposes, that gravel, occurring as an hereditary disease, is to be explained.

He thinks it probable, that the chrySTALLIZATION of concreting matter in the urinary passages takes place principally during the night, when the urine that has been secreted is free from agitation; and, if a crystal should not be discharged soon after it has been formed, it must, by the addition of fresh matter, increase
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in size. After some time, it will become too large to be passed along the ureters or the urethra. But, where such crystallizations take place, they are, he thinks, very generally carried away by the current of urine, before they have arrived at this magnitude.

The growth of urinary concretions is not always, he observes, equally rapid ; but will, he thinks, be in proportion to the redundancy of the acid, the degree of agitation in the urine, and the length of time for which it shall be retained after it has been secreted. All the varieties in colour, he considers as proceeding from adventitious matter attaching itself to the redundant acid ; while firmness of texture will depend very much on the crystallization not being interrupted by the motion of the body, or by the viscosity of the urine, from mucus, or any other cause. He concludes his remarks on this subject, with observing, that the irritability of the urinary passages, is, in some, much greater than in others ; and hence, there are instances of calculi having existed in the urinary passages for a considerable length of time, without producing much uneasiness.

Our

Our author next proceeds to consider the cause and progress of Gout. He observes, that a precipitation of the concreting acid in the fluids, is attended with prejudice to other parts of the system, as well as to the urinary passages. When the acid happens to be detained from substances with which it was combined, it becomes a species of matter to which the body is unaccustomed. And, when the redundancy is very considerable, a deposition of the particles will take place in the blood-vessels, so as to give an interruption to the freedom of the circulation. It is, he thinks, in consequence of such interruption, that there frequently arises a peculiar affection of the inflammatory kind, which is denominated Gout.

To illustrate and confirm this opinion, the author enters into a comparison between rheumatism and gout. He considers impediment to the circulation, as the proximate cause of each; but he contends, that the circumstances producing that impediment are different. In the first, he supposes it to arise from a diminished size of the vessels themselves, proceeding from spasm: In the second, from the presence

sence of an uncommon matter, the concreting acid. But in both, the obstruction, he thinks, has the effect of occasioning an increased impetus of the blood, by which the obstruction is at length overcome, and the circulation restored.

On this theory, he attempts to shew how the muscles and the skin are most frequently affected with Rheumatism, and the tendons, ligaments, and membranes, with Gout, from the smallness of the capillary vessels in the latter, and from the principle of motion in those of the former; and he endeavours to draw a farther confirmation of his opinion from the causes of Gout. These he refers either to acids introduced into the body, or generated in it. On the first principle, he explains the influence of acid wines: On the second, he accounts for the induction of the disease, by intoxicating compounds of any kind; by a life of luxury; by a state of indolence; and by an inordinate pursuit of pleasures. For, by these, the powers requisite for the process of digestion are brought into disorder, and the vegetable part of the diet is permitted to run into the acetous fermentation.

Although

Although we readily allow that this theory has the merit of ingenuity; yet, like every other hypothesis respecting the cause of gout, we cannot help considering it as liable to many objections. It is even, we think, matter of great doubt, how far inflammation is, in any case, the consequence of obstruction. It is very certain, that obstruction often subsists without inflammation; and that, on the other hand, many causes of inflammation cannot be supposed to have any influence in inducing obstruction. But, even taking this part of the hypothesis for granted, it is still very difficult to conceive, in what manner many phænomena of the disease can be reconciled with this proximate cause. The sudden attack of this affection; its sudden transition from one part of the body to another; the instant relief of one part, when another comes to be affected; and, finally, the various anomalous forms which the disease puts on, having an exact resemblance to different affections, are, in our opinion, irreconcilable to the idea of its depending on any fixed obstruction at a particular part, arising from concreting acid.

On

On this theory, however, our author next proceeds to explain the state of the body most favourable to gout. He remarks, that a redundancy of the concreting acid, giving occasion to obstructions in particular parts of the body, is in general to be ascribed to the introduction of a foreign acid. But it may, he tells us, arise also from the actual production of a preternatural quantity, either of this acid, or of the other native acids; and, in all cases, he considers such accumulation as extremely conducive to the production of this affection. But, when the secretion by the various glands is easy and rapid, there can never, he thinks, be any considerable redundancy, as the acid will be evacuated from the circulation as fast as it is detached. But, on the other hand, when there is a disposition to contraction in the secretory vessels throughout the body, the redundancy may become great. Hence, he considers a deficiency of secretion as predisposing to gout; and, on this principle, he explains the influence of warm climates in preventing gout, the frequent occurrence of the disease with the robust, and with those far advanced

vanced in life, and its very rare occurrence with infants, and even with females.

In explaining the phænomena of a paroxysm of gout, he observes, that when the freedom of circulation is interrupted by the redundant acid, the consequent inflammatory affection may yet be forwarded by a variety of circumstances. On this ground, he explains the induction of a fit of gout by the use of stimulants, by unusual repletion, or by a greater degree of exercise than the body has been accustomed to; and these have been, in general, termed, Occasional causes of the disease. On the same ground, also, he accounts for the chief appearances attendant on a regular paroxysm. He considers the circumstance chiefly constituting the disease, as being an inflammation in parts, of which the functions have been interrupted by the redundant acid. It is, he thinks, most frequently excited in the tendons and ligaments of the feet; because, in them, the interruption is the greatest. From this there arises very acute pain; and the increase of action is communicated, not only to the vessels of the surrounding part, producing swelling and redness, but, in a greater or less de-

gree, to the heart, and to the whole arterial system. By means of this augmented impetus of the blood, the obstruction is in a short time overcome, and the tendency to contraction, in the various emunctories, removed; and the redundant acid, which, till then, had been prevented from passing off by the kidneys, appears in the urine as a lateritious sediment. By the continuance of the relaxation for some days, the whole of the accumulated acid is discharged, the increased action subsides, and every thing returns to its natural condition. In this manner, then, he explains the phenomena of the regular paroxysm.

Some have considered a regular paroxysm as having the property of restoring the vigour of the system. Our author, however, thinks, that, of itself, it causes a diminution of strength; but, by removing every morbid affection, it gives the system a disposition for acquiring vigour. And, from the incompatibility of two diseased actions occurring at the same time, a doctrine which he considers as established by Mr John Hunter, it proves, he thinks, an universal remedy for chronic complaints, which were the source of permanent debility.

After

After these observations on the cause of gout and of gravel, the author proceeds, in the third and last part of this work, to treat of the prevention and cure of these two diseases. He endeavours to shew, that they may be both prevented and cured by guarding against a redundancy of acid. And, as a preternatural redundancy of the concreting acid, giving occasion to gravel and gout, appears in most cases to have arisen from the introduction of foreign acids, the means of prevention must be pointed against that circumstance. And they may, our author thinks, come under three divisions: 1st, Abstinence from acids; 2^{dly}, The prevention of acidity from fermentation; and 3^{dly}, The destruction of the acid. On each of these heads, he offers some observations.

The acids produced by fermentation, and the native acids of fruits and vegetables, are, he observes, more frequently conveyed into the stomach than any other. In liquors that have undergone the vinous fermentation, there is, in general, more or less of the acid of tartar; and those wines in which it exists in greatest proportion, have been found produc-

tive of arthritic and nephritic complaints. And, although a total abstinence from wine is scarcely to be expected; yet our author thinks, there cannot be much hardship in suffering some restriction in the choice of wines. Those wines in which the proportion of spirit is the greatest, in general contain least of the acid of tartar; for, being insoluble in spirit, it is deposited in the cask. The best wines, in our author's opinion, are Madeira, Sherry, and Port. These, when arrived at a proper age, by which both the tartar is deposited, and the native acid of the grape destroyed by fermentation, may, he tells us, be used in moderation. But Claret, Champagne, and other small wines, in which the proportion of acid is considerable, should, he thinks, be entirely rejected, as they never can be indulged in with impunity. For the same reason, he is also for entirely prohibiting Cyder, Perry, and hard ales. And although, in many other malt liquors, the quantity of acid is not very considerable; yet, in gout and gravel, it will, he thinks, be better to abstain from them entirely. For, in that state of the stomach which frequently accompanies these diseases, they are
very

very apt to be converted into an acid, by running into fermentation. He advises, therefore, that pure water, or toast water, be substituted to table beer. He objects to even a small quantity of spirits being mixed with the water, as it is apt to steal upon men by imperceptible degrees, till it gets so deeply rooted, that they have it not in their power to relinquish it.

The acid of vinegar is seldom used in such quantity as to produce, of itself, a preternatural redundancy of the concreting acid; but, where there is already a redundancy, as a small proportion of any acid must be detrimental, vinegar should be rejected.

It is generally believed, that the native vegetable acid in the juices of fruits, is capable of undergoing the process of digestion, by which it will be deprived of its acidity; and, in the common state of the body, fruits afford nourishment, and are conducive to health. But, if the digestive powers be deficient, our author thinks they are inadmissible. The greatest quantities of native vegetable acid are apt to be employed in punch; and he

is of opinion, that the diseases here treated of frequently proceed from it.

When gout and gravel have originated from an excessive use of acids, unconnected with disorder in the stomach, a cure may be effected, our author thinks, by strict attention to the regulations laid down. And, even when the use of acids has only co-operated with the generation of acid, in producing these diseases, considerable advantage will still be derived from a diminution of the cause: And, a moderate quantity of wine being allowed, there cannot, he thinks, be any hardship or inconvenience in abstaining from acids under every other form.

In treating of the prevention of acidity from fermentation, our author observes, that the production of acid in the alimentary canal, must always be considered as a mark of imperfection in the vital powers; and one method of preventing it is, to take care that nothing inclining to the acetous fermentation be received into the stomach.

Though the matter of animals is, of itself, incapable of becoming acid, and may therefore appear to be best adapted for the prevention of diseases springing from a redundancy

dancy of acid ; yet animal substances, our author tells us, have often been observed to increase the tendency of vegetable matter to acidity. And, from this cause, a disposition to the formation of acid in the *primæ viæ* has sometimes been corrected by abstinence from animal food. Milk, and the farinaceous matter of the seeds of the *gramina*, are more easily digested than any other substances from which an equal nourishment is obtained. Hence, they are peculiarly adapted to nephritic and gouty patients. They may be used under such different forms as to give considerable variety ; and the tendency of milk to acidity, is often fully corrected by the addition of solid matter, such as bread, rice, oatmeal, or the like.

It is not, however, necessary, according to our author, to adhere to this diet in every case ; but he recommends the exclusion of all kinds of fat, and high-seasoned food. The lean part, however, of beef, mutton, or veal, and any kind of fish or fowl, that is light and easy of digestion, may be used in moderation. But he allows, that the effects of many substances, upon different stomachs, are so various, that

it is not an easy matter to give particular directions concerning diet. Experience, he observes, is the surest guide; and every man must, in some degree, be regulated by his own feelings.

When the digestive faculties are constitutionally bad, or have been impaired by irregularities, there are various methods by which they may be brought into better condition. Nothing is of greater efficacy in restoring them, than proper exercise. But the action of the stomach appears also to be very much under the influence of the mind. Cheerfulness and good humour contribute exceedingly to the preservation of health; but the peevish and the melancholy are peculiarly liable to have disorders in the alimentary canal.

For the purpose of increasing the tone of the stomach, our author recommends also the different vegetable bitters. When it is intended that the effects of these should be confined to the stomach, small doses, he tells us, are sufficient; and those which have the least astringency are to be preferred. Chalybeates have been employed with advantage for increasing the digestive powers; but, from
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their astringency, he thinks they are not equally suited to every habit.

The formation of acid in the stomach, may, he tells us, be sometimes prevented, by the exhibition of such articles as have a tendency to check fermentation. He recommends Camphor, as better suited for this purpose than any other article. If the use of these remedies be judiciously combined, with proper attention to diet, the acidity from fermentation, may, in general, he thinks, be avoided.

Sometimes, however, there will be a generation of acid, notwithstanding every endeavour to prevent it. In that case, it becomes necessary to aim at its destruction. This may be effected, by employing a quantity of alkali, or of absorbent earth, sufficient for the saturation of it. These enter into chemical union with the acid, so as to form compounds, in which the characteristic properties of each element are lost; and, when thus neutralized, its influence on the fluids will be completely obviated. The volatile alkali, though little used, may, he thinks, be employed with advantage, when a stimulus is wanting for removing the faintness with which an imperfection

tion in the digestive powers is often accompanied. The fixed and vegetable alkalies differ very little in their effects. In their pure or caustic state, they have been considered as too acrimonious for internal exhibition; but, to their employment in a mild or aerated state, there are also objections. Some inconvenience, our author thinks, is even to be apprehended from the aerial acid being detached; but still more from the distention which the vapour occasions in the bowels, with unpleasant symptoms of flatulency. The acid in the primæ viæ may be corrected by means of saponaceous compounds, as the attraction of the acid to alkali is stronger than to oils. But care should be taken to obtain soap in the greatest degree of purity; and he thinks that the *Sapo amygdalinus* of the *Pharmacopœia* is best adapted for internal use. The acrimony of the caustic alkali may be corrected, by diffusing it through any mucilaginous fluid. In this manner, it may be rendered sufficiently mild, without being offensive; particularly when added to a basin of veal or mutton broth; and, if they be boiled together for a minute or two, the combination will be very complete.

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The earthy substances employed for the correction of acidity in the stomach, are, calcareous earth and magnesia. He considers these, however, as best fitted for the purpose, when they are free from aerial acid; and therefore, he prefers lime water and calcined magnesia, to chalk and common magnesia. He does not seem to be apprehensive of any bad effects from their long continued use. The dose must be proportioned to the degree of acidity; but it is much better, he tells us, to use them frequently during the day, than to give a great quantity at once. They may be employed before or after each meal; and bitter infusions may be occasionally exhibited along with them. Our author is of opinion, that if these practices be used with judgment, every particle of acid generated in the primæ viæ, and likewise any that has been received into the stomach, will be deprived of those properties by which acids are rendered prejudicial.

This treatise is concluded with some observations, by which the author endeavours to prove, that alkalies will have the effect, not only of removing the matter from which calculus

culus proceeds, but also even of dissolving calculi themselves. The urine, when it does not contain any preternatural redundancy of acid, will, of itself, become a menstruum for calculus. But, besides this, he contends, that even the alkali itself may arrive at the kidneys in such a state as to act upon calculus.

Upon the whole, our author is of opinion, that by pursuing the plan recommended, not only the diseases against which it is particularly levelled may be kept at a distance, but a multitude of others, proceeding from disorder in the digestive faculties, may be mitigated and cured; and that strength of mind, and sound health, will succeed to infirmity and pain. We sincerely wish, that this opinion may be confirmed by experience; but, although there can be no doubt that superabundant acid is productive of many bad effects, yet we cannot help thinking, that there would be an equal error in the total destruction of it. For while, according to our author, the concreting acid, as he terms it, is the sole cause of gout and of gravel, there is, we think, no less reason for believing, that
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the firmness of our bones entirely depends upon it; and that its existence, in a certain proportion, is, in many particulars, essentially necessary for the health and constitution of the animal system.

III.

III.

*De Febre nosocomico. Auctore Sebastiano Cera,
M. D. 4to, Mediolani. Vide Commentarii
de Rebus in Scientia Naturali et Medicina
gestis. 8vo, Lipsiæ, Vol. XXXII.*

THE third edition of this useful book, and that with the advice of John Galeatus, Duke of Serbellonius, who presides over the great hospital at Milan with much applause, is augmented by a dissertation on the Rural Epidemic Fever of that country. It is the fruit of twenty years observations made in that hospital. The fever here described, is a somewhat peculiar species of acute fever, chiefly approaching to the putrid kind; endemic, like the fevers of camps, ships, and prisons; seizing most people once or twice, and but rarely a third time. In the beginning, it comes on insensibly, and under the dress of a gentle catarrhal complaint; so that, of the first day
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of the disease, a conjecture is not to be formed; but it must be reckoned from the day of the patient's being confined to bed. The diagnostic symptoms, in the beginning, are principally a great loss of strength, with slight fever, and stomach complaints, not to be removed by the usual remedies. On the third or fourth day after being confined to bed, small spots appearing, afford a character of this disease, and at the same time mark the first stage of the complaint, often an inflammatory one; signs of saburra having, however, preceded it. After the 7th day, the symptoms of inflammation have almost gone; but the stomach complaints remain, and more severe putrid symptoms appear, such as stupidity, coma vigil, purging, swelling of the belly, especially when the increased diarrhoea is stopped either by art or nature, and, in more severe cases, pain, and very fetid fæces. The worst symptoms are, subultus tendinum, spasm, and locked jaw; so that the patients die convulsed. In the beginning, the fever has the paroxysms of an intermittent, not yielding to Peruvian bark; but, in its progress, it becomes continued and more severe. Then, however, it for the most

most part ends in health. The urine, in the beginning of the disease, is often crude and watery. Remaining saturated for several days, it foretells convulsive affections. When it is scanty and without sediment, suddenly becoming limpid, it is a sign of delirium. In those who are to recover fast, for the most part about the fourth day, it is of a citron colour; with a light white sediment. The frequent ischuria, in the beginning of the disease, is to be cautiously enquired into, whether it be renal, or originate in the bladder.

Besides defiled air and bad food ; lying in the bed which a sick person has used, or still uses, the inspiration of air exhaled by the sick, and his clothes, favour the communication of the disease. The diversity of the constitution, and duration of the disease, depends upon the diversity of the concomitant circumstances, time of year, and epidemic constitution. The voracious, and those indulging in too frequent use of wine, the fearful, those much given to venery, and those too much addicted to their studies, are most severely affected ; but those labouring under mental hypochondriasis, for the most part remain free, perhaps on account of
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the acid resisting putridity. The other causes are, air not renewed, cohabitation with the sick, with the greater or less number of putrid diseases occurring in the hospital at that time. Its degeneration into a chronic disease, and death supervening, often to the more robust, rather than the weak, is frequently owing to the abuse of blood-letting.

The internal cause, according to our author, in the first stage, is a gastric suburra, and slight inflammatory habit: In the second, an acrid putridity in the whole mass of humours, for the most part hurtful to the nerves. Sometimes a real inflammatory fever arises in the hospital, which must be carefully distinguished from the putrid one, so frequent. These cases are, however, easily converted into putrid fevers. Worms do not constitute a peculiar cause of this fever, although they are not to be neglected when they appear to be present. A weak mind is favourable, both to the generation and duration of the disease. A conjunction with scurvy and phthisis is often a cause of the length and severity of it. The same likewise happens from the venereal disease; which, however, the powers of na-

ture and art being sufficient, is driven off along with it. The causes occasioning and favouring a putrid fever in the country, are, an incautious heaping of carcases, stagnation, and other causes, vitiating the air, and lastly, want of victuals. The occasional causes are referred to abuse of animal, and neglect of vegetable, food.

This disease, for the most part, terminates on the fourteenth day after confinement to bed. Sometimes it is protracted longer; and it rarely ends on the eleventh. A sudden crisis seldom occurs about the seventh, although its forerunner, a sediment in the urine, shewed itself on the fourth day. It oftener happens by the belly on the fourteenth day; and, unless this be the case, on the twenty-first. In those about to die, there is no mark of crisis by the urine. By the symptoms, we may determine whether a flux by the belly be critical or symptomatical. In apparently desperate cases, a crisis happening, sometimes restores the sick person unexpectedly. The signs by the urine, are Ischuria vesicalis, a forerunner of coma, and true Lethargy. The pulse, in the first period, is often inflammatory; in the second,

cond, it is for the most part small, and sometimes unequal. Much, however, is not to be dreaded, unless at the same time it be pretty quick and hard, the phlogistic state, joined to the putrid, coming on again. The longer peticulæ are of appearing, the less danger they portend; nor do they disappear on the accession of a diarrhœa; but sometimes, at the approach of the crisis, critical miliary eruption immediately following, a fatal metastasis takes place to the head and nerves. The joints of others become gangrenous; particularly of those in whom, by the end of the disease, the flux became slower, or was untimely checked. Gangrene, preceded by a severe pain in the part to be affected, quickly spreads. It remains a difficult problem, whether amputation will stop it. It sometimes extends to more than forty days; while the patient, at length, perishes by a gradual decay. Gangrene, from lying in bed, and filth, is much to be dreaded. A tumor of the parotid gland is always fatal, unless, in a few days, it be either resolved, or terminated in a good suppuration. A complication of the disease with lues venerea is dangerous. This fever is sometimes under

the form of a double tertian, sometimes remittent; but is distinguished by the symptoms peculiar to the hospital fever, and the fruitless use of febrifuges. Sometimes, however, after forty days have elapsed, it changes, with a good omen, into a tertian, which is cured, either spontaneously, or by the use of Peruvian bark.

In the beginning, from half a dram to a dram of the powder of ipecachuan is to be used as an emetic; and sometimes there is advantage from the repetition of it. But the author does not prescribe it for a third time; as then, the matter is, he imagines, too crude to be overcome, either by emetics or cathartics. If emetics be improper, we must use gentle laxatives, such as cream of tartar, rhubarb, and chiefly the pulp of tamarind, or its solution. Sometimes both vomiting and purging are produced by eight grains of ipecachuan, and twelve of rhubarb. A spontaneous looseness is to be assisted by the pulp of tamarinds and cream of tartar. Anthelmintics are only to be prescribed in cases of worms. He thinks, that mercurius dulcis, and diagridium sulphuratum, are the most proper.

Antiseptic,

Antiseptic, abstergent, and sometimes stimulant clysters, are to be used ; but they must be cautiously exhibited in cases of pregnancy. He mentions an example of a pregnant woman being cured by the use of repeated doses of the English purging salt. In patients subjected to hernia, when there occurs a necessity for the use of cathartics or emetics, we must prepare for them, by putting the hand on the hernia during their operation.

Venesection is to be cautiously prescribed, according to the phlogistic diathesis. A hard pulse often deceives, happening from the irritation of the acrid fluid. This is especially the case, if, at the same time, it be small and quick, and joined with a daily exacerbation, coma vigil, convulsions, limpid urine, very fetid fæces, and the blood drawn be not phlogistic. Sometimes, after a lasting disease has been present, the blood is inflammatory, even in relaxed, indolent, and pallid habits, especially in women. The inflammatory state sometimes comes on again, though rarely ; and then there is need of a new venesection. The cause is more frequently to be attributed to an error committed in diet, requiring the use of evacnants ; or the crisis is

at hand, which is easily disturbed by venesection. The place from whence blood is to be let, does not seem of much consequence; but, when the brain is affected, a section of the jugular vein, or temporal artery, is to be preferred. The sequelæ of arteriotomy, however, suppuration, and hæmorrhage arising from it, deserve the greatest caution.

The other remedies, in the first stage of the disease, are antiphlogistics, as, vegetable acids. Some have been cured by the daily use of the juice of twenty or more lemons, diluted in water. Nitre, particularly in a scanty secretion of urine, has been of service. Mineral acids in symptomatic hæmorrhages, in which opium is scarcely proper, and not unless joined with acids, are often useful. Cold water also has been found very advantageous.

The remedies in the second stage, are camphor, the most powerful antiseptic; but, when given by the mouth, it often creates nausea. Exhibited to the extent of two drams in clysters, with almond emulsion, gum arabic, and emollient decoction, it has been productive of much benefit, a loosening enema being subjoined, if the belly become bound. It is necessary
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to be cautious in stopping a flux by astringent clysters. After the pains are allayed, a gentle purgative is to be given, consisting of cassia, tamarinds, and soluble tartar. But, if the bilious humours are very foul, in place of the soluble tartar, half a dram, or a scruple, of roasted rhubarb, is to be employed. If the gripes still, however, remain, an emollient injection, with a small dose of philonium, is to be given. In diarrhœa, with gripes, an emulsion of camphor, with syrup of white poppies, is highly useful. In a troublesome tenesmus, accompanied with an excretion of a bloody mucous matter, and debility, clysters of chalybeate milk, with yolks of eggs, may be employed. After the diarrhœa is checked, if a great putridity remains, the anodoyne liquor of Hoffman is to be given, from twenty to sixty drops, to counteract the swelling of the belly. If the neck be principally affected, succinated spirit of hartshorn, properly saturated, may be employed to the extent of twenty or sixty drops. If ischuria renalis be conjoined with this state, the sal volatile Succini is to be employed alone. Musk is used in con-

vulſive affections, if other antipafmodics do not ſucceed, beginning by giving a grain every fixth hour. Conjoined with the extract of Peruvian bark, it forms an elegant compoſition for a bolus. The bark is, however, cautiously to be avoided, when inflammatory ſymptoms prevail. Then bleeding is the beſt remedy. Camphor, in urgent caſes, may be given even to the extent of three drams in a day; and, in the way of injection, to fix or eight. Peruvian bark is not equal to it, becauſe it loſes its febrifuge quality in acute caſes; and its antifeptic one alone remains, when there is nothing requiring it. It is only to be exhibited when the fever becomes tertian. It is hurtful, or at leaſt of no uſe, where obſtruction of the viſcera or inteſtinal canal, or ulcers, are preſent, either internally or externally. Then the worſt change happens, by a degeneration of the fever into phthiſis pulmonalis, eſpecially in youthful and hectic diſpoſitions. In ſuch caſes, all ſpirituſous, aromatic, and ſaline ſubſtances, are hurtful. Demulcents are to be employed, and mild cathartics; as, tamarinds, with caſſia. Gentle pectorals

pectorals and anodynes are to be used; and, when the fever is going off, abstergent and balsamic medicines. The best remedy, however, is an issue in the arm. The causes of this degeneration, are, impure air, and too full diet.

Gangrene is prevented by the immediate application of emollient anodynes, conjoined with the internal use of purgatives. When a swelling of the feet remains after the fever, it is cured merely by a nourishing diet, and internal roborants. Erysipelas affecting the head is to be combated by blood-letting and antiphlogistics. But we may overcome it, when more slight, and affecting the extremities, by fumigation with amber, and gently opening the belly. An abscess, in consequence of this fever, is to be treated according to the general method used in other inflammations. Gangrene, from long confinement to bed, is to be prevented by Peruvian bark and camphor, which are of the greatest advantage in wet gangrenes, but are less beneficial in the dry species. Blisters are used in lethargic sleep, and prostration of strength; and likewise wine,

wine, and the elixir of vitriol, all other cordials and antiseptics being often used without effect. Frictions with vinegar, and its vapours, when dispersed in the bed-chamber, are useful. Sinapisms are to be applied, but not longer than is necessary, lest, pain being excited, they should produce fever and convulsions.

The author then proceeds to treat of the diet at the different periods of the disease, which is to be accommodated to the constitution. Concerning the regimen of women who are nursing when affected with this fever, he observes, that they are to be recruited by the use of the arcanum duplicatum, blisters, and camphor, the odours of which are not, in general, offensive to women in childbed. But a small blood-letting, and low diet, will sometimes be necessary.

He then treats on the means of prevention, both general and particular. His directions are good, upon the whole, but contain nothing new.

To the present edition of this treatise, is added an appendix, concerning a fever analogous

gous to the former, which was observed after the publication of the foregoing work. This fever chiefly happens in workhouses and bridewells, and therefore is denominated the Jail fever. Its symptoms, and method of cure, are nearly the same. The dissection of those who died, threw no light on the disease.

We have here also the description of another disease similar to this, which has raged epidemically, almost every year, in the dutchy of Milan, amongst the husbandmen; chiefly those inhabiting the most parched lands, and hills exposed to the mid-day sun. Its causes are, the impure and humid air of the stables, which serve them in the winter for houses; the sudden check given to their perspiration, occasioned by exposing themselves to rain immediately on quitting these habitations; the impure water of their wells; close contact with infected persons, and making use of their clothes; their slothful and wilful dirtiness; and the neglect of cleaning their streets. The phænomena of the disease are almost similar to the former; but, for the most part, if not always, it was accompanied with lumbrici and
putrid

putrid matter, giving rise to vermin. With most of those labouring under this epidemic, there occurred an almost continued tertian. The cure is, for the most part, the same as in the hospital fever; but anthelmintics are never to be omitted; of which, however, no one seemed to be always preferable to the rest. Thus, in the case of the gourd worm, after many articles had failed, they have been removed by the use of the elixir propritis. The general remedies of this fever, were, generous wine, acid vegetables, and sometimes aromatics. For the poor, the root of filix mas is best adapted for worms. The use of mercury is to be dreaded, on account of the diarrhoea and disposition to putridity which it occasions. Emetics are of much use in the beginning of the disease, but much less in the end. Of the purgatives, cream of tartar may be employed alone, or conjoined with the powder of the fern, or rhubarb. Venesection is to be seldom used. Two classes of alteratives, the antiphlogistics and antiseptics, are often also of service. The other means of assistance, are to be derived from the food, clothing, purification

cation of the air, and the care of attendants. The preventives are, the purity of the air, construction of better houses, and better water. The necessity of constructing country hospitals, into which the sick should be put, even against their inclination, that the contagion may be stopt, is, our author thinks, an obvious measure.

IV.

IV.

Descriptio Phrenitidis et Paraphrenitidis Monasterii in Westphalia, circa medium mensis Martii grassari incipientium vere contagiosarum earumque, factæ curationis. A Ferd. Saalmann, M. D. 4to, Gottingæ. Vide Commentarii de Rebus in Scientia Naturali et Medicina gestis. 8vo, Lipsiæ, Vol. XXXII.

THIS description is dated the 30th of April 1788; but an appendix of the 30th of June is added, after the violence of the contagion was gradually diminishing. We will therefore here present our readers with observations extracted from both.

The disease, from the 2d of April to the 30th of June, attacked more than four hundred and fifty men, of whom thirty-two died; and of these, indeed, nobody under twenty years of age, although it spared no age. It
 attacked

attacked almost none, except of the lowest rank, who were covered with filth and nastiness; and the contagion was, by that means, propagated to such a degree, that, in a small hovel, five, eight, or more, were seized with it. For the most part, it began, like the catarrhal fever, gradually with pain, or a peculiar sense of uneasiness of the head, back, loins, and joints; in many, with tremors of the joints, and intolerable pain of the hands, feet, and legs; in some, with an universal stupor, and rigidity of the whole body; with pain, tension, anxiety, and beating of the heart; with nausea, and a painful sense of weight in the stomach; likewise with vomiting, or at least heartburn, and sometimes gripes. The tongue, from the first, was white, and for the most part very dry, sometimes growing black a little before death. There was, not unfrequently, an uncommon desire of sleep, but it was short, restless, and unrefreshing, with peevishness and unusual anger; sometimes forgetfulness; in a few, delirium and difficulty of hearing, and a sense of suffocation, like that in Hysteria. After the fifth, or at least the sixth or seventh day, delirium came on, the eyes became

became bloody, and full of tears; respiration more difficult; and, in some, the skin was of a jaundice colour.

In some, the discharges by the belly are bilious, and sometimes many worms are present; in others, there are alternate white and bilious *fæces*; their sleep is unusual; their hearing, formerly difficult, is now quicker, and then again duller. Their urine, in the beginning pale, becomes of a deep yellow colour, then deposits a black sediment; and, when death is at hand, it becomes sometimes the colour of ink. A sweat is perceived, chiefly on the upper parts of the body. The pulse is generally natural. In some, there are marks of blood in the excretions by the bladder, rectum, and nostrils; and blind piles distress the patient.

Forgetfulness and sleep gradually increase. Singultus comes on, with paralysis of the tongue, and difficulty of speaking; and, between the 12th and 20th day, death closes the scene.

This disease, when in a more severe state, that is, such cases as terminated in death before the 12th day, presents, from the beginning, most of the symptoms above mentioned, some even
more

more violent. On the fourth day, all became worse. They were attacked by death; either in the same manner with peripneumonic persons, or by convulsions. In the most severe cases, they died in a lethargic state.

The fever, in both kinds, when slight, is sometimes increased on the fourth day. From this time it becomes more severe, the fits coming on daily, sometimes alternate days, but rarely twice in the same day. About the increase, a coldness sometimes came on, the forerunner of critical sweats; or purpura, which often preceded death. Sometimes the real symptoms of pleuritis, or peripneumonia, were joined. The blood then drawn, was covered with an inflammatory crust; in other cases, for the most part, it was florid, without the crust.

The disease attacked the old rather than the young, and was more fatal to those of forty and upwards, and also to those formerly hypochondriac and melancholic, than to others. The bad symptoms were, tremors of the joints; convulsions in the muscles of the face; urine covered with a pellicle of a clear, red, or bright yellow colour, or black; *fæces bilious*,

and then becoming white and very fetid, the changes not answering to the fits or remissions of the fever; a florid face suddenly becoming pale; eyes full of tears; convulsions; running from the nose; profuse sweat of the head, neck, and shoulders, after black urine; grinding of the teeth; a strong pulsation at the heart; the collectio flocculorum; slight hæmorrhagy at the nose; convulsions; paralysis of the tongue; a change into peripneumonia, or the symptoms of pleuritis coming on early; perpetual watchfulness; comatose state; and sleep lethargic, especially if, from the beginning, forgetfulness was united with delirium.

The favourable symptoms were, a copious flow of blood through the anus, by the urinary passages, or nostrils, and even by the lungs and mouth; dreams which the patient could remember; delirium eased by natural sleep; critical sweats, after the increase of the fever; the deafness gradually diminishing, and ceasing; a decrease of the disease, like that of any other acute fever.

The marks of death were, a short time of a comatose state after furious delirium, and
perpetual

perpetual watchfulness ; sleeps becoming heavier, with weak febrile motions, a sonorous deglutition, and ejection of food, with cough.

The author gives the more severe state of the disease, the name of Phrenitis from contagion ; the milder, Paraphrenitis from contagion. He thinks that the proximate cause of phrenitis, commonly reckoned an inflammation of the brain and its membranes, was not the only morbid affection which here occurred, but that it is conjoined with, or immediately follows, an inflammation, not only of the diaphragm, but likewise of the abdominal viscera. This he holds to be the proximate cause of the paraphrenitis, the brain being then drawn in by sympathy. He places the predisposing causes in those things that disturb the circulation of the fluids in the abdomen or brain ; the occasional causes, in the non-naturals, and in contagion.

The cure, in the beginning, is for the most part the same with that of acute fevers : copious drinks, impregnated with the vegetable and mineral acids ; free air ; blood-letting,

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and,

and, if necessary, a repetition of it ; a loosening of the belly, either by clysters or purgatives, of which rhubarb, either alone, or, where a suspicion of worms is present, conjoined with some mercurius dulcis, were, in his opinion, the best. After this, ipecacuanha, with or without tartar emetic, is to be exhibited at intervals, if necessary. Nitre, sal ammoniac, the milk and flowers of sulphur, and the sulphur auratum antimonii, are also recommended. Diarrhœa, he tells us, is never to be checked in the beginning. Blisters are to be soon applied to the neck and thighs, and kept long open. On an increase of the disease, repeated blood-letting and vomiting may be had recourse to, but with great prudence. In place of the latter, kermes mineral, in small doses, has been frequently employed with the greatest advantage. Camphor, internally, and in antiphlogistic clysters, are serviceable ; and acid wines, chiefly Rhenish. Peruvian bark, joined with antiphlogistics and antiseptics, or with gentle preparations of rhubarb, are often of use. The real intermittent fever sometimes following, is to be driven off by bark, which
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is also to be given to convalescents, long after the disease seems to have terminated, joined at the same time with martial powders, to drive off hypochondriasis and melancholic delirium.

V.

Observations des Fieures inflammatoires, bilieuses, dont trois ont été suivies de Pemphigus, qui paru en être la Crise. Par M. Salabert, Médecin, Chirurgien-major des Chasseurs Royaux de Provence à Antibes. Vide Journal de Médecine, Janvier 1790. 12mo, Paris.

IT is of consequence, without doubt, to the improvement of the healing art, that every one of its administrators, who is attentive in his practice, accurate in his observations, exact and strictly true when he describes new and unusual occurrences which he has observed in his practice, should speedily communicate to the public those peculiar to himself, when they may assist in illustrating the practice, in directing the diagnosis, or determining the prognosis. It is to fulfil as much as lies in his power his duty,
that

that Mr Salabert publishes the following observations.

Intermittent, remittent, catarrhal and faburral fevers, have reigned during the Spring of the year 1789, in that part of Provence which the author inhabits. All those which he has treated in the military hospital at Antibes, yielded to the use of emetics more or less repeated. Cathartics seemed of little service, and were only employed as auxiliary means. Febrifuges, and above all the Cinchona, have not been of use in these diseases; but the second emetic, given at the beginning of the cold fit, has in general made it give way, before its fourth or fifth return.

The heat of the Summer, though moderate for the climate, had occasioned some changes in the character and progress of the diseases which happened then: continued fevers had succeeded remittent, and the inflammatory and bilious diatheses had prevailed in all the diseases in the months of July and August. The period of the irritation was the longest: for the most part it comprehended the first seven days. During this first stage, all the symptoms had a violence and intensity really alarming.

The pulse was hard, full, and quick ; respiration loud and frequent ; the mouth dry, foul, and bitter. The desire of vomiting announced the approach of the disease, and did not cease till after copious evacuations of bile, assisted by emetics ; the head was pained ; a ringing in the ears continually disturbed the sick person much ; the skin was dry, hot, and parched ; all the secretions were either stopped, or considerably diminished. The small quantity of urine which the patient voided was passed with difficulty, and with a sensation of heat almost painful. This violent stage was but moderately calmed by two bleedings ; usually the first day, or the night following. Emetics, which it was necessary to repeat often, brought on, by increasing the evacuations, a sensible amendment. The use of cathartics, given the second day of the first stage, seemed to operate quickly, with evident advantage. It was by the aid of these active, but strongly indicated means, that the second stage was brought on. It was by the diminution of all the symptoms, that the period of crisis was announced ; its operation was commonly performed without troublesome or disagreeable consequences.

consequences. The reaction of the vital powers on the morbid matter, operated in a satisfactory manner: the solids were now in that state in which one would choose to fix them, that which seemed most favourable to their action on the fluids, which were always more or less contaminated by the disease.

The method of cure made use of, in this second stage, consisted principally in plentiful dilution with whey, acidulated by cream of tartar, to every pint of which half a grain of tartar emetic had been added, as a means of assisting the diaphoresis, and of combating the spasms of the smaller vessels. The duration of this second period was usually four days.

The paroxysm of the eleventh day, which was commonly more violent than those of the four preceding, without, however, presenting any alarming symptom, brought along with its remission, the first critical evacuations: a white sediment in urine; a slow tumefaction of the belly, with one or more yellow evacuations, decidedly critical, commonly stopped the fever, together with free perspiration, which was always salutary. Such were the means by which an end to the disease was obtained. This last
stage

stage seldom exceeded six days in duration. The only medicines then employed, were some palliatives, and these with great circumspection, lest they should turn aside, from the route it had chosen, the progress of the crisis.

These were the most general phænomena in eleven patients, who, during the months of July and August, were treated in the hospital for the inflammatory bilious fever which reigned during these months. Mr Salabert thought it necessary to draw up hastily this memoir of the prevailing epidemic, that its appearances might be better compared with the disease which is the subject of the following observations; a disease which, in several particulars, seems to agree with it entirely, but which differs from it, however, in its rare and unexpected crisis.

OBSERVATION I.

DULAC, a corporal of the Royal Chasseurs, in Provence, about twenty-six years of age, of a strong, robust, sanguine temperament, and dark

dark complexion, was admitted into the military hospital at Antibes, on the 20th of July, at four in the afternoon. His disease had commenced that morning at ten o'clock, by a violent but short fit of shivering, with an insupportable desire of vomiting, which a copious discharge of green and bitter bile had not relieved. The hot fit that followed it, was very severe, with a parched skin. The headache which accompanied it was of such a nature, that the admission of light, or the least motion, made him cry violently. His thirst was unquenchable, and warm drinks renewed his desire of vomiting. His respiration was low, and breath sultry; his pulse quick and hard; and there was observable in different places, some slight twitchings of the tendons. He had a frequent desire to make urine, without being able to pass more than a very few hot and limpid drops. A first bleeding, of nine ounces and upwards, occasioned no change in the disease. At the time of that evacuation, he vomited a great deal of bile, and the blood drawn was covered with a thick, tough, buffy coat. The bleeding was repeated in the night, and followed by the same vomiting as
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the first ; it was to the extent of eight ounces or nine, and shewed the same inflammatory symptoms. He had for some hours an interrupted and fatiguing sleep.

As the irritation seemed only slightly alleviated, a third bleeding was ordered on the morning of the 21st. Taking advantage of the relaxed state which followed it, an emetic was given in solution, which fully answered its intention, as it produced an abundant evacuation, and put a stop to a pain of the stomach, which had been present since the attack of the disease. An injection given at ten o'clock, did not operate. At two P. M. he was in the same state as on the evening before, excepting the diminution of the inflammatory symptoms, which were only, however, moderately allayed ; the night was fatiguing by the want of sleep, and desire to vomit, which recurred. His drink, during all this time, was nitrated lemonade, which he took with pleasure, and in great quantity.

On the 22d, he got a second emetic. The advantages which had followed this method of treatment in these months, and the salutary effect of emetics, employed still less as evacuants

ants than as the sure means of putting a stop to the spasms of the small vessels, and in particular, to re-establish the action of those of the skin, were sufficient indications of the propriety of its use. The evacuation was some time after as abundant, and of the same nature, as on the evening before. It was also followed by some looseness; but the skin remained parched and dry; the exacerbation was neither retarded nor diminished; and the urine was no higher coloured than before.

On the 23d, the same phænomena appeared at the same hour, that is to say, the remission which took place at four A. M. was disturbed by the exacerbation at eleven A. M. An injection given at night, with the nitrated lemonade, which the patient still relished, were the only remedies employed that day.

The bound state of the belly, and the foulness of the tongue, were indications for the use of a cathartic, which was administered on the 24th, at four A. M., and produced considerable evacuation: copious and bilious fæces rendered the belly lax, the urine was sufficiently high coloured, the internal heat and thirst were sensibly diminished; but the exacerbation

tion returned at the same hour as before, and with it the same symptoms shewed themselves. Their intensity seemed but little, if at all, diminished; the skin, in particular, was in the same state. An injection, which was given at night, and had not operated, was perhaps the cause of his agitations and troubled sleep that night.

The 25th and 26th presented no favourable change in the symptoms. The paroxysm and its intermission occurred at the usual time, and all the symptoms, except those which depended on the plenitude and foulness of the primæ viæ, preserved their intensity. The temperant powders of Stahl, given every five hours, to the extent of five grains, and some injections, were the medicines employed. They seemed to change but little the alarming state of the patient.

On the 27th and 28th, whey, acidulated by cream of tartar, and rendered diaphoretic by the emetic tartar, was substituted to the nitrated lemonade. This change produced some stools; and, according to the observation of Dr Cullen, it acted more particularly on the skin, which it rendered soft and moist.

The

The fit of the 29th was violent, and the night preceding it restless. The symptoms had acquired an alarming increase; the abdomen was hard, slightly swelled, and painful to the touch; the want of sleep, and anxiety, were present the whole night. The fit ended at four in the morning, in a viscous, fetid sweat. A sense of heat and pain in the belly and fore-side of the thighs, occasioned an examination of these parts, when three blotches of a deep red colour were observed, and of the size of the hand, on each of which were a dozen of elevated white points, somewhat like the military eruption. This observation took place at five o'clock. At seven, they observed on each of the blotches twelve or fifteen round white and confluent vesicles, of the size of a pea. The skin on which they were situated, was of a pale red colour, and the pain and heat had sensibly diminished. The patient was in other respects easier. During the day, the vesicles swelled, and became transparent; some of them burst that night, and discharged a yellowish serum; the others opened on the second and third days. The largest were of the size of half an almond: the places on which
they

they were situated, had the appearance of a blister, and were treated in the same manner. Every place that had been affected with inflammation, excoriated, and healed easily.

On the 30th, the fit was entirely wanting; the patient had abundant sweating during the night, and in the morning several critical stools; the urine deposited a sediment; the fever ceased; and the convalescence might be dated from the third day of the appearance of the pemphigus.

OBSERVATION II.

CAISON, a foldier of the same regiment, was admitted into the hospital three days after the former. He had been his bedfellow at the barracks, and was placed near him in the hospital. His disease, from the beginning, had a striking resemblance to that of his comrade. Their age and temperament were similar. The treatment was the same, as well as the event; this difference only excepted, that the inflamed blotches, on which the pemphigus appeared, were more numerous, and larger, and that the

the exanthematous vesicles were separate, and not more than two or three on every inflamed blotch; but these, to the number of twelve, occupied particularly the abdomen, and top of the thighs, and each pustule was a good deal larger. The disease terminated as happily as the former; the critical evacuations were the same; and the convalescence was neither long nor difficult. This was not, however, the case with the subject of the following observation:

OBSERVATION III.

LOMBARD, a soldier in the same corps, was admitted into the hospital on the 10th of August. His disease presented itself in such a manner, as to leave no doubt of its nature; and constant attention paid to the two former patients; were the grounds of diagnosis. His disease pursued, in the commencement, the same track with the other two. The same method of cure was employed, but with this difference, that he was only bled once, and

the emetic was not repeated, as the bound state of his belly rather indicated cathartics.

On the 19th, when, if the disease had undergone the same changes as the two others, the crisis should have happened, his strength was considerably impaired, and he was much fatigued in the night-time, by a watery looseness, accompanied with a pain of the abdomen. The skin, which should have been soft and moist at the end of this fit, remained dry and parched, a sharp heat attacked the left side of the œsophagus, and the tongue was dry and foul: a single vesicle, of the size of a nut, had appeared on the xiphoid cartilage, and the skin around had not changed its colour. The patient became low, and his pulse miserable. It was easy to discover, in this state of affairs, that impotent re-action had taken place of the expected crisis, and that disease being thrown upon the intestines, had caused the diarrhœa, and other alarming phænomena, which had continued since the morning of the 19th.

Blisters appeared strongly indicated, and were ordered to be applied on the night of the 20th, on the internal and upper part of the thighs.

thighs. Camphor, to the extent of half a dram, was given to allay the subfultus tendinum. The blisters raised the pulse, and augmented his strength, and the subfultus yielded to the third injection of camphor; but the diarrhœa and irritation of the intestinal canal still remained. The successful employment which M. de Laffonne the elder, had made of milk, in the diarrhœa which remains after small-pox and measles, suggested the use of milk, mixed with a decoction of nitrous plants. This method succeeded perfectly; the diarrhœa was stopped; the pain and heat of the abdomen, no longer troubled the patient; the fit was less severe, and the night was good; and the patient for the first time since the commencement of the disease, spent five hours in tranquil sleep.

On the 22d, the fever had entirely ceased; the belly was easy and natural; the œsophagus was not painful; all this day he had only two stools, and the fæces were yellow and hard; the blisters suppurated considerably; the fever, however, returned in a slight degree at night.

To conclude, says the author, we shall observe, that the convalescence was long and difficult; that there were several relapses of the fever; and that the patient was not entirely recovered, until the transpiration and sweating re-appeared. The pustules suppurated long, and, during the convalescence, it was necessary to have recourse several times to purgatives. The sensibility of the alimentary canal remained until the perfect recovery of the patient, on the 10th of September.

To these singular histories, Mr Salabert subjoins some theoretical considerations.

The disease we have just described, says he, differs essentially from all the exanthematous continued diseases. The vesicular fever, according to Sauvages, is idiopathic; and none of the five varieties described by him, present any thing analogous to that we have observed. The same may be said of the varieties of Dr Cullen, who has only copied the French nosologist. The 147th and 149th observations of Car. Pison, give us no more information. All these

these authors consider the pemphigus as an acute, inflammatory, exanthematous fever, in which the pustules are idiopathic, and present themselves on the second or third day; whereas, in the above mentioned, they appeared at the end of the disease, and when they both might and ought to be reckoned a salutary crisis.

But, is this termination, says our author, peculiar to a disease which in many respects resembled the inflammatory bilious fever which was prevalent at that time, sufficient to constitute a new genus, or ought it only to be considered a variety of the latter? This is a difficulty still unresolved.

The author, besides, proposes to examine if this disease be contagious; and at what time, and in what manner it is so. These questions are connected with some, more general, which he proposes to make the subject of a memoir, in which he will inquire, If contagion be as varied as some authors suppose? Of what nature are the contagious miasmata? What circumstances favour their action? If contagion can exist without pyrexia? and, If all pyrexias

be not contagious, although in very different proportions? These facts, he thinks, are of such a nature as to throw some light on a subject which is much connected with the practice of the healing art.

VI.

VI.

An Account of the Tabasheer ; in a Letter from Patrick Russell, M. D. F. R. S. to Sir Joseph Banks, Bart. P. R. S. Vide Philosophical Transactions, Vol. LXXX. 4to, London.

A Substance, known under the name of Tabasheer, is a medicine in high repute in many parts of India. And although there may, perhaps, be reason for suspecting, that its supposed virtues are entirely founded on popular credulity, yet we presume that an account of it cannot be unacceptable to our readers.

Dr Russell thinks that this drug was first introduced to the notice of the Western world through the works of the Arabian physicians, all of whom mention it as an important article in their materia medica. It seems likewise to be of much more general use in Turkey, than

the part of India where Dr Russell was situated, Vizagapatam.

To the Arabs and Turks, it is known by the name of *Tabasheer* only; in the Gentoo language, it is called *Vedroo-paloo*, bamboo-milk; in the Malabar, *Mungel-upoo*, salt of bamboo; and in the Warriar, *Vedroo-car-pooram*, bamboo camphor.

The dangerous error of rendering it Spodium, in the Latin translations of the Arabian writers, has been long ago exposed by Don Garzia Dall' Horto.

Most of the Arabian writers agree in the *Tabasheer* being a production of the Indian reed, more especially of such as were set on fire by the accidental friction of the reeds. Several mountaineers, however, with whom the Doctor conversed on this subject, affirmed, that this was not the only tree subject to accidental ignition by friction; but added, that they never looked for *tabasheer* in the half-burnt fragments of the bamboo, though it might sometimes be found there as well as in others.

The genuine *tabasheer* is undoubtedly a production of the *Arundo Bambos* of Linnaeus,
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the Ily of the hortus Malabaricus, and the *Arundo Indica arborea maxima*, cortice spinoso, of Herman; and it is no less certain that fire is not a necessary agent in its production.

It is found in those bamboos, vulgarly called the females, which are distinguished from the males by the size of their cavities; but whether they be different trees, is yet uncertain.

A peculiar rattling perceived on shaking the bamboo, is, by the natives, considered as an indication of its containing tabasheer, although, on splitting some reeds, it was found but so inconsiderable, and adhering so closely to the sides of the cavity, that no rattling was perceived.

In the month of July 1788, thirty-seven green bamboos, of five or six joints each, were split, and accurately examined by Dr Russell. In nine of them, was no vestige of this drug; in the other twenty-eight, there was some found, in one, two, or three joints of each. The quantity in all was inconsiderable, the produce of the whole twenty-eight not much exceeding two drams. The empty joints were sometimes contiguous, sometimes interrupted.

rupted. The drug consists of very dissimilar particles, when first taken out of the bamboo. Those reckoned of the first quality, were of a bluish, white colour, resembling small fragments of shells, harder than the others, but might be easily crumbled between the fingers into a gritty powder, and had a slight saline testaceous taste; and, when not loose with the others, were found adhering indiscriminately to the septum at either end, but never to the sides near the middle of the joint. The others were of a cineritious colour, rough on the surface, and more friable; and, intermixed with these, were some larger, light, spongy particles, somewhat resembling pumice-stones.

From the inconsiderable quantity procured from twenty-eight reeds, Dr Russell thinks it probable, that though not absolutely confined to certain regions, it may be produced in greater abundance in some soils than in others; but that, in all regions where the bamboo grows favourably, some proportion of the drug will be found, however much it may vary in quantity or quality.

He then proceeds to make a few observations on the juice of the recent bamboo, supposed

posed to form tabasheer. The existence of this fluid in the bamboo, is known by shaking it; and very few joints, in proportion, contain any. The fluid is always transparent, but varied in consistence. When thicker, it was likewise whiter, and had more of a slight saline subastringent taste. After evaporation, the residuum had a pretty strong saline taste, with less astringency.

The recent green bamboos, which, upon shaking, seemed to contain water in the cavity, lost this appearance after standing a few days; and, when split, sometimes, as if the whole had escaped, no fluid was found in the cavity, the interior surface being only discoloured, as if by recent moisture: but, generally, some of the fluid remained in a mucilaginous state, in the lower part of the joint. Dr Russell also remarks, that small worms were sometimes found in the same joints with the water, and that these survived several hours, swimming about in the water after its extraction.

In the latter end of October 1788, a green bamboo, of five joints, was brought to Dr Russell, which appeared to contain both water
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and tabasheer. After he had kept it three days, the sound of the water, upon shaking the reed, could hardly be perceived, and, on the fifth day, it was entirely imperceptible. Upon splitting this bamboo, about half a dram of the fluid, now thickened into a mucilage, was found at the bottom of the upper joint. The second joint contained some perfect tabasheer, loose in the cavity. The third joint was empty, excepting a few particles of tabasheer, which adhered to the sides near the bottom. The fourth joint contained, at the bottom, above a dram of a brownish pulpy substance, adherent to the septum. The last joint, in like manner, contained half a dram of a substance, thicker and harder in consistence, and nearly of the colour of white wax.

This specimen, Dr Russell thinks, exhibited at one view the progress of the tabasheer through its several stages. The sound distinctly perceived in the first joint, on the 23d of October, was produced, he imagines, by the water in a fluid state. On the 31st, this water having become thicker, the sound, upon shaking, was very obscure. On the 2d of November,

November, no sound was perceptible, and when the reed was split, the water was found reduced to a mucilage. The fourth and fifth joints contained the drug in a more advanced state. In the one of these, it was thicker than a mucilage, and of a brownish colour ; in the other, more of the fluid part having evaporated, the colour was whiter, and it wanted but little of the consistence of the perfect tabasheer found in the second joint.

This letter from Dr Russell to the Royal Society, was accompanied with several specimens of the tabasheer from different parts, particularly some of the prime sort from Hyderabad ; which differed from the others not only in its superior whiteness, but in being much harder than even the purest particles in his own specimens, which he was certain had undergone no adulteration, and also in being much heavier, and in no degree friable to the finger.

Dr Russell adds a postscript to this letter, written after his return to Britain, and dated at Weymouth, July 16. 1790. From this it appears, that, upon splitting some of the reeds sent to the Royal Society, at one of their meetings,

meetings, the tabasheer, which these contained, was found to agree in all respects with the specimens sent from India. He farther tells us, that several specimens are under chemical trial, and that the result of these will probably hereafter be communicated to the Society.

In the paper before us, Dr Russell has said nothing with respect to the reputed medical virtues of this article; nor has he offered any conjecture with regard to the cause of the effusion of this fluid in certain joints only of the bamboo. From a future paper, it is to be hoped, that we may derive some information with regard to both these particulars. We would only at present remark, that as Dr Russell has found, in some instances, small living worms in the same joints with the water, it seems to us not improbable, that the effusion is, in every case, the effect of animals wounding the bamboo, and depositing in it their ova, or the rudiments of their young. At least, an inquiry into this subject may perhaps be thought not unworthy of the attention of some future philosopher, who may have

have opportunities of examining the reeds containing tabasheer in its different stages.

A specimen of the tabasheer has been sent to Dr Duncan, by his ingenious and worthy friend Dr Simmons of London. We hope, therefore, that we may hereafter be able to communicate to our readers some trials made with this substance at Edinburgh. But in addition to Dr Russell's account, we shall here present our readers with an extract of a letter to Dr Simmons, from Mr J. L. Williams, an ingenious surgeon in the service of the Honourable East India Company in Bengal, dated at Benares, October 23. 1790, and inserted in the first volume of Medical Facts and Observations, lately published at London.

“ I have lately procured from the hills in
 “ this neighbourhood, a drug, specimens of
 “ which I shall send by the ships of this sea-
 “ son, for your inspection. It is called in Per-
 “ sian, Tabasheer; in Hindoo, Buns-lochum,
 “ or salt of the bamboo. It has a peculiar
 “ quality of strongly adhering to the tongue,
 “ and is held in great esteem by the natives,
 “ in a variety of diseases. But I have not yet
 “ been

“ been able to ascertain its virtues from my
“ own experience.”

In a Persian work, the *Tofut ul-Monein* of Mahomed Monein Hoseiny, I have found the following observations on this substance, and its supposed medicinal properties.

“ The *tabasheer* (says this writer) is procured from the cavity of the Indian reed, or
“ bamboo; and it is said, that when, from the
“ violence of the winds, fire takes hold of
“ these reed thickets, the *tabasheer* is formed
“ of the joints of the reeds, which are separated from the ashes thereof. The best kind
“ is of a white colour, and of a roundish
“ shape, having to the palate a small degree of
“ a rough and biting taste. There is a factitious kind made of burnt bones; but this
“ has but a small degree of bitterness to the
“ taste, and possesses no strength.

“ The *tabasheer* will not dissolve in water.
“ It puts a stop to bilious vomitings, and to
“ the bloody flux. It is also of service in cases
“ of palpitation of the heart, in faintings, and
“ for strengthening those members of the body that are weakened by heat.

“ It

“ It is useful for the piles, and for acute
 “ and burning fevers, and for pustules in the
 “ mouth ; and, given with oxymel, it is of ser-
 “ vice against restlessness, melancholy, and
 “ hypochondriacal affections. The habitual
 “ internal use of it is prejudicial to the virile
 “ powers. It is also said to be prejudicial to
 “ the lungs. The correctives are, the gum of
 “ the pine, and honey : the dose is to the
 “ weight of two d’herems or seven mashás.”

After giving this extract, Mr Williams adds,
 “ With the specimens of this drug, I shall al-
 “ so send you a piece of the bamboo unopen-
 “ ed, with some of the salt or sugar in it ;
 “ from which you will be convinced that the
 “ tabasheer is not found by the burning of the
 “ bamboo, as the author just now quoted, and
 “ others, have supposed.”

It is not very probable, that the tabasheer
 has all the virtues here attributed to it : but if
 it really possesses any of them to a remarkable
 degree, it may be considered as no unimport-
 ant addition to our materia medica.

VII.

An Account of the Nardus Indica, or Spikenard. By Gilbert Blane, M. D. F. R. S. Vide *Philosophical Transactions*, Vol. LXXX. 4to, London.

DR BLANE begins this paper, by regretting that the records of antiquity afford but imperfect descriptions of natural objects. Of most of them, little more is said than merely giving their names. But as language is local and fluctuating, the fruits of the ingenuity and labour of one age, have been thus, in a great measure, lost to another.

He has been led, he observes, to these reflections, by an account sent him, some time ago, by his brother in India, of the Spikenard, or Nardus Indica, a name familiar in the works of the ancients, but not hitherto satisfactorily ascertained. His brother, in a letter dated Lucknow, December 1786, says, that "travel-
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“ ling with the Nabob Visier, upon one of his
 “ hunting excursions towards the northern
 “ mountains, I was surpris'd one day, after
 “ crossing the river Rapti, about twenty miles
 “ from the foot of the hills, to perceive the
 “ air perfum'd with an aromatic smell; and,
 “ upon asking the cause, I was told it pro-
 “ ceeded from the roots of the grafs, bruised,
 “ or trodden out of ground, by the feet of the
 “ elephants and horses of the Nabob's retinue.
 “ The country was wild and uncultivated, and
 “ this was the common grafs which covered
 “ the surface of it, growing in large tufts,
 “ close to each other, very rank, and in gene-
 “ ral from three to four feet high. As it was
 “ the winter season, none of it was in flower;
 “ indeed the greatest part of it had been burnt
 “ down on the road we went, that it might
 “ be no impediment to the Nabob's encamp-
 “ ments.

“ I collected a quantity of the roots to be
 “ dried for use, and carefully dug up some of
 “ it to be planted in my garden at Lucknow.
 “ It there thrrove exceedingly, and, in the
 “ rainy season, shot up spikes, five or six feet
 “ high. Accompanying this, I send you a

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“ drawing

“ drawing of the plant in flower, and of the
“ dried roots, in which the natural appearance
“ is tolerably preserved.

“ It is called by the natives, Terankus, which
“ means literally, in the Hindoo language,
“ Fever restrainer, from the virtues they at-
“ tribute to it in that disease. They infuse
“ about a dram of it in half a pint of warm
“ water, with a small quantity of black pepper.
“ This serves for one dose, and is repeated
“ three times a day. It is esteemed a power-
“ ful medicine in all kinds of fevers, whether
“ continued or intermittent. I have not made
“ any trial of it myself, but shall certainly take
“ the first opportunity of doing so.

“ The whole plant has a strong aromatic
“ odour; but both the smell and virtues re-
“ side principally in the husky roots, which,
“ in chewing, have a bitter, warm, pungent
“ taste, accompanied with some degree of that
“ kind of glow in the mouth which carda-
“ mums occasion.”

Besides the drawing, a dried specimen has
been sent, in such good preservation, as to
enable Sir Joseph Banks to ascertain it to be

a species of *Andropogon*, and different from any *Nardus*.

There is great reason, however, Dr Blane tells us, to think that it is the true *Nardus Indica* of the ancients.

For, *first*, The circumstance in the account above recited, of its being discovered in an unfrequented country, by the odour it exhaled when trod upon by the feet of horses and elephants, corresponds, in a striking manner, with an occurrence related by Arrian, in his history of the expedition of Alexander into India, lib. vi. cap. 12.

Secondly, It was evident, that it was a plant of the order of *gramina*, from the term *Arista*, which was appropriated by them to the fructification of grains and grasses, being so often applied to it. The epithet *Pubentis*, sometimes given it, seems to point out, that it belonged to the genus *Andropogon*. The description of the *Nardus Indica*, by Pliny, does not indeed correspond with the specimen; for he says it is *frutex, radice pingui et crassa*, whereas it has small fibrous roots: but as Italy is far distant from the native country of this plant, it is reasonable to suppose, that others,

more easily procurable, used to be substituted for it. Indeed there were nine different plants by which it could be imitated and adulterated. It is probable, the Nardus of Pliny, was a plant growing in the countries on the Euphrates, or in Syria, where the great emporiums of the Eastern and Western commerce were situated; and Dioscorides mentions a Nardus Syriaca, as a species different from the Indica; and both he and Galen, by way of fixing more precisely the country of its growth, call it Nardus Gangites.

Thirdly, Garcias Ab Horto, a Portuguese, has given a figure of the roots, or rather lower parts of the stalks, which corresponds with the specimen sent to Dr Blane; and he says expressly, that there is but one species of Nardus known in India. It is not to be met with in the hortus Malabaricus. The Schænanthus of Rumphius does not agree with it, being only a palm in height; but he mentions having seen a dried specimen brought from Mackran, of which the leaves were almost five feet high.

Fourthly, The sensible qualities of this are superior to what commonly passes for it in the shops, being possessed both of more fragranc
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and pungency, which seems to account for the preference given to it by the ancients.

With regard to the virtues of this plant, it was anciently, Dr Blane observes, much esteemed as an article of luxury, as well as a medicine; and likewise, as its virtues depend on a principle not so volatile as essential oil, this would be a great recommendation of it to the ancients, who were unacquainted with the art of distillation. The fragrance, and aromatic warmth, depend on a fixed principle, like that of cardamums, ginger, and some other spices. Dr Blane tried to extract the virtues of the Nardus, by boiling water, by maceration in wine and proof spirits; but it yielded them sparingly, and with difficulty, to all these menstrua.

It had a high character among the ancients, as a remedy both externally and internally, and is one of the ingredients in all antidotes, from those of Hippocrates to the officinals, which have kept their ground to modern times, under the names of Mithridate and Venice Treacle. Celsus and Galen recommend it both externally and internally, in pains of the stomach and bowels. It would appear, that

the natives of India consider it as an efficacious remedy in fevers; and its sensible qualities promise virtues similar to those simples now in use among us in such cases. Besides a strong aromatic flavour, it possesses a pungency of taste, little inferior to the serpentaria, and much more considerable than the contrayerva. Dr Blane concludes with observing, that it is mentioned in a work attributed to Galen, that a medicine composed of this, and some other aromatics, was found useful in long protracted fevers, which are the cases in which medicines of this class are employed in modern practice.

VII.

*An Account of a Child with a Double Head.
In a Letter from Everard Home, Esquire,
F. R. S. to John Hunter, Esquire, F. R. S.
Vide Philosophical Transactions, Vol. LXXX.
4to, London.*

AS the description of this curious occurrence in human nature, does not easily admit of being abridged, we shall here present it to our readers in Mr Home's own words to Mr Hunter, leaving out only a few passages, not particularly connected with the description.

DEAR SIR,

I feel a particular satisfaction in having been enabled to add to your invaluable collection, the very uncommon double skull of a monstrous child, born in the East Indies, which attracted the attention of all the curious in Calcutta, where it was shown alive.

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The following account of the child, when six months old, I was favoured with, from Sir Joseph Banks, who, from the handwriting, and other circumstances, believes it was written by the late Colonel Pierce. I have, however, been less solicitous to ascertain the author, as the observations contained in this account agree so entirely with the remarks that were afterwards made, and with the appearances of the skull, that they require no name being annexed to them, in confirmation of their having been made with accuracy and fidelity.

The child was born in May 1783, of poor parents. The mother was thirty years old, and named Nooki ; the father was called Hannai, a farmer at Mandalgent, near Bardawan in Bengal, and aged thirty-five.

At the time of the child's birth, the woman who acted as midwife, terrified at the strange appearance of the double head, endeavoured to destroy the infant, by throwing it on the fire, where it lay a sufficient time to have one of its eyes and ears considerably burnt.

The body of the child was naturally formed, but the head appeared double, there being,
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besides the proper head of the child, another of the same size, and, to appearance, almost equally perfect, attached to its upper part. This upper head was inverted, so that they seemed to be two separate heads united together, by a firm adhesion between their crowns, but without any indentation at their union, there being a smooth continued surface from the one to the other. The face of the upper head was not over that of the lower, but had an oblique position, the centre of it being immediately above the right eye.

When the child was six months old, both of the heads were covered with black hair, nearly in the same quantity. At this period, the skulls seemed to have been completely ossified, except a small space between the ossa frontis of the upper one, like a fontanel.

Observations on the Superior or Inverted Head.

No pulsation could be felt in the situation of the temporal arteries, but the superficial veins were very evident.

The neck was about two inches long, and the upper part of it terminated in a rounded, soft tumor, like a small peach.

One

One of the eyes had been considerably hurt by the fire ; the other appeared perfect, having its full quantity of motion : but the eyelids were not thrown into motion by any thing suddenly approaching the eye, nor was the iris at these times in the least affected ; but when suddenly exposed to a strong light, it contracted, though not so much as it usually does.

The eyes did not correspond in motion with those of the lower head, but appeared often to be open when the child was asleep, and shut when it was awake.

The external ears were very imperfect, being only loose folds of skin, and one of them mutilated by having been burnt. There did not appear to be any passage leading into the bone which contains the organ of hearing.

The lower jaw was rather smaller than it naturally should be, but capable of motion. The tongue was small, flat, and adhered firmly to the lower jaw, except for about half an inch at the tip, which was loose. The gums, in both jaws, had the natural appearance ; but
no

no teeth were to be seen, either in this head or the other.

The internal surfaces of the nose and mouth were lubricated by the natural secretions, a considerable quantity of mucus and saliva, being occasionally discharged from them.

The muscles of the face were evidently possessed of the powers of action, and the whole head had a good deal of sensibility. When the mother's nipple was applied to the mouth, the lips attempted to suck.

The natural head had nothing uncommon in its appearance, the eyes were attentive to objects, and the mouth sucked vigorously.

The parents of the child were poor, and carried it about the streets of Calcutta as a curiosity, to be seen for money; and, to prevent its being exposed to the populace, they kept it constantly covered up, which was considered as the cause of its being emaciated and unhealthy.

The attention of the curious was naturally attracted by so uncommon a species of deformity; and Mr Stark, who resided in Calcutta during this period, paid particular attention to
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the appearances of the double head, and endeavoured to ascertain the mode in which the two skulls were united, as well as to discover the sympathies which existed between the two brains. Upon his return to England, finding that I was in possession of the skull, and proposed drawing up an account of the child, he very obligingly favoured me with the following particulars, and has likewise allowed me to have a sketch taken from a very exact painting, made under his inspection, from the child, while alive, by Mr Smith, a portrait painter, then in India.

At the time when Mr Stark saw the child, it must have been nearly two years old, as it was some months before its death, which I have every reason to believe happened in the year 1785. At this period, the appearances differed in many respects from those taken notice of when it was only six months old.

The burnt ear had so much recovered itself, as only to have lost about one fourth part of the loose pendulous flap. The openings leading from the external ear appeared as distinct as in those of the other head.

The

The skin surrounding the injured eye, which was on the same side with the mutilated ear, was in a slight degree affected, and the external canthus much contracted; but the eye itself was perfect.

The eyelids of the superior head were never completely shut, remaining a little open even when the child was asleep, and the eyeballs moved at random. When the child was roused, the eyes of both heads moved at the same time; but those of the superior head did not seem to be directed to the same object, but wandered in different directions. Tears flowed from the eyes of the superior head almost constantly, but never from those of the other, except when crying.

The termination of the upper neck was very irregular, a good deal resembling the cicatrix of an old sore.

The superior head seemed to sympathise with the child in most of its natural actions, although, when the skin of the superior head was pinched, the child seemed to feel little or no pain, at least not in the same proportion as was felt from a similar violence being committed on its own head or body.

Some

Some months after these observations were made, it died, from the bite of a Cobra de capelo, and was buried near the banks of the Boopnorain river. It was afterwards dug up by Mr Dent, on whose grounds the parents at that time lived.

My friend Captain Buchanan, when at Bengal, residing at Mr Dent's house, was much struck with the appearance of the skull, and expressed a wish that he might be allowed to bring it to Europe, and present it to me. His request was no sooner communicated, than it was complied with, that gentleman having too much liberality to hesitate a moment in sending so rare a curiosity to Europe. I should do both these gentlemen injustice, were I not to attribute their readiness, on the present occasion, to oblige me, in a great measure to their knowing that the skull would be deposited in your collection, which must now be considered more as a national and public repository, than a private cabinet.

The two skulls which compose this monstrous head, appear to be nearly of the same size, and equally complete in their ossification, except

except a small space at the upper edge of the ossa frontis of the superior skull, similar to a fontanel. The mode in which the two are united is curious, as no portion of bone is added or diminished for that purpose; but the frontal and parietal bones of each skull, instead of being bent inwards, so as to form the top of the head, are continued on, and, from the oblique position of the heads, the bones of the one, pass a little way into the natural futures of the other, forming a zig-zag line, or circular future, uniting them together.

The two skulls seem to be almost equally perfect at their union; but the superior skull, as it recedes from the other, becomes more imperfect and deficient in many of its parts.

The meatus auditorius, in the temporal bone, is altogether wanting.

The basis of the skull is imperfect in several respects, particularly in such parts as are to connect the skull with a body. The foramen magnum occipitale, is a small irregular hole, very insufficient to give passage to a me-

dulla spinalis. Round its margin are no condyles with articulating surfaces, as there were no vertebræ of the neck to be attached to it. The foramen lacerum in base crani, is only to be seen on one side, and, even there, too small for the jugular vein to have passed through.

The ossa palati are deficient at their posterior part; the lower jaw is too small for the upper; and the condyle, and coronoid process, of one side, are wholly wanting.

In most of the other respects, the two skulls are alike. The number of teeth in both is the same, and is sixteen.

From an examination of the internal structure of the double skull, the two brains have certainly been inclosed in one bony case, there being no septum of bone between them. How far they were entirely distinct, and surrounded by their proper membranes, cannot now be ascertained; but from the sympathies which were taken notice of by Mr Stark, between the two heads, I should be inclined to believe, that there was a more intimate connection, than simply by means of nerves, and, therefore, that
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the substance of the brains was continued into one another.

Had the child lived to a more advanced age, and given men of observation opportunities of attending to the effects of this double brain, its influence on the intellectual principle must have afforded a curious and useful source of inquiry : but, unfortunately, the child lived only long enough to complete the ossification of the skull, so as to retain its shape, by which means we have been enabled to ascertain and register the fact, without having enjoyed the satisfaction that would have resulted from an examination of the brain itself, and a more mature investigation of the effects it would have produced.

Yours, &c.

E. HOME.

To this letter of Mr Home's in the Philosophical Transactions, are subjoined two copperplates. In the first, the child is represented as it appeared at the age of twenty months. This plate is copied from a picture in the possession of Mr Stark. In the second plate,

there is a representation of the double head, exactly half the natural size; and likewise an exact representation of the double skull, which is now in Mr Hunter's collection, upon the same scale as the former.

IX.

Experiments and Observations on the Matter of Cancer, and on the aerial Fluids extricated from Animal Substances by Distillation and Putrefaction; together with some Remarks on Sulphureous Hepatic Air. By Adair Crawford, M. D. F. R. S. Vide Philosophical Transactions, Vol. LXXX. 4to, London.

DR CRAWFORD begins this ingenious paper with remarking, that there are several varieties in the colour and consistence of the matter discharged by cancerous ulcers. It varies from a pale ash colour to a reddish brown, or even almost to a black. Its consistence is generally thin, although in cancerous, as well as other malignant ulcers, we frequently meet with a white fordes adhering to the surface of the sore, and which appears scarcely miscible with water. The appearance

of the discharge is often varied by remedies both external and internal, but in general the cancerous ulcer is, in its advanced stage, accompanied with a peculiar odour, more highly fetid and offensive than that which is emitted by other malignant ulcers. Cancerous matter occasions, by its absorption, scirrhus tumours of the lymphatic glands, contiguous to the parts affected, and gradually corrodes the branches of the larger blood-vessels, which have a peculiar power of resisting the action of other purulent discharges.

Dr Crawford has found, by experiments, that, on the addition of a solution of vegetable fixed alkali to cancerous matter, no sensible change was produced; but when the vitriolic acid was employed, the colour of the matter was uniformly deepened towards a brown, and an effervescence took place. The presence of an alkali in cancerous matter, was likewise detected by syrup of violets.

The aerial fluid which was disengaged by the vitriolic acid, appeared, from its odour, to have a nearer resemblance to hepatic, than to any other species of air. As it seemed, from its sensible qualities, to be a very active, and probably

probably deleterious principle, Dr Crawford endeavoured to inquire more particularly into its nature. He has found that it has many properties of hepatic air, viz. solubility in water, and the precipitation which is occasioned from a solution of it in water, by the addition of nitrated silver. He therefore thinks it may be not improperly termed animal hepatic air. He found, from many experiments, that the odour of cancerous matter was increased by the addition of the vitriolic, and entirely destroyed by the concentrated nitrous and dephlogisticated muriatic acids. He concludes, that the alkali contained in cancerous matter is the volatile alkali. It seems probable, that the alkali was united to the aerial fluid, with which the matter of cancer is impregnated, since the smell was increased on the addition of the vitriolic acid.

Dr Crawford then proceeds to treat of the air extricated from cancerous matter, and other animal substances, by distillation. He here discovers, that the principle on which the peculiar odour of cancerous matter depends, is very volatile; that this volatile substance,

which perhaps is the active principle in the matter of cancer, is not changed by simple exposure to heat, but is a permanently elastic fluid; that the aerial fluids which are extricated from fresh as well as putrid animal substances, by distillation, have nearly the same properties with that which is disengaged by a similar process from the matter of cancer. Each of them appears to consist of two distinct fluids, one of which is soluble, the other insoluble, in water. The part that is insoluble, burns with a lambent flame, and has all the characters of heavy inflammable air; whereas the soluble part resembles the fluid which is extricated from cancerous matter by the vitriolic acid. It has a fetid odour, decomposes nitrated silver, combines with caustic volatile alkali, and possesses many of the properties of common hepatic air.

There are several particulars, however, in which common and animal hepatic air differ materially from each other. Although both be fetid, yet their odours are not exactly similar. When common hepatic air is decomposed by the concentrated, nitrous, or dephlogisticated muriatic acid, sulphur is separated; but

but when animal hepatic air is decomposed by these acids, a white flaky matter is disengaged, which is evidently animal, because it becomes black by the addition of concentrated vitriolic acid; nor is sulphur separated during the combustion of animal hepatic, with atmospheric air.

His experiments likewise prove, that the soluble part of the air disengaged by heat from the lean of animal substances, consists of three distinct fluids, viz. one fourth fixed air, and the remaining three fourths animal hepatic, mixed with a small proportion of alkaline air. He also discovered, that these three airs, slowly combining together, formed an oily empyreumatic substance, which was found at the bottom of the jar in which they were received. One measure of the air received in the end of the distillation of the lean of fresh mutton, being previously well agitated with water till the soluble part was absorbed, was mixed, over quicksilver, with one measure of pure air; and an electric shock being passed through it, a violent explosion took place; and now the volume of air was diminished nearly one fourth. The residue being agitated with water, six
tenths

tenths were absorbed, which was found to be fixed air. Of the insoluble remainder, five parts being mixed with five of nitrous air, a diminution of three parts took place; one fifth of the insoluble residuum was therefore pure air. It is therefore, he thinks, manifest, that, by the combustion of the pure and inflammable air in the foregoing trial, fixed air was produced; the phlogisticated air found in the residue, being that which was contained in the pure air previous to the inflammation.

One measure of the same air, used in the experiment last mentioned, not agitated with water, was mixed, over quicksilver, with one measure and an half of pure air, and fired by the electric shock. The portion of the tube occupied by the mixture, before the deflagration, was 1 inch and $\frac{15}{100}$, and, after it, an inch and one tenth. Being agitated with lime water, one third was absorbed. A portion of the insoluble residue being exposed to a lighted taper, burned with a faint blue flame.

From the foregoing trial it was evident, that $1\frac{1}{2}$ parts of pure air, were insufficient to saturate one of the animal air, that had not been previously agitated in water.

The

The experiment was repeated as follows: Two parts of pure, being mixed with one of inflammable air, occupied an eighth of an inch. The mixture being fired by an electric shock, the residue stood at a little less than .5: when this residue was agitated with lime water, it was almost wholly absorbed. On trial, nearly one half of the animal air used in this experiment, was found to be soluble in water.

Hence it appears, that the quantity of pure air required to saturate the insoluble part of animal air, is somewhat less than that required to saturate the compound fluid, which had not been previously agitated with water; and as the latter consists almost entirely of heavy inflammable, animal hepatic, and fixed air, the last of which is already saturated with pure air, it is manifest, that the above mentioned difference must depend on the animal hepatic air: whence it follows, that this air must contain a large portion of the inflammable principle. From the quantity of fixed air produced in the last experiment, there is the strongest reason to believe, the basis of heavy inflammable air forms one of the constituent parts of animal hepatic air.

When

When equal parts of pure and animal air were burnt together, a considerable increase of bulk almost invariably took place; and when the proportion of animal was to pure air as 21 to 15, the bulk of the mixture was increased one half.

The following experiments were made to learn the cause of this increase of bulk.

Three measures of animal, were mixed with two parts of pure air, and several strong electrical shocks made to pass through the mixture; but it would not take fire. Half a measure of pure air was then added; and the mixture being fired, was increased from .9 of an inch, to 1 inch and .3. Three measures of this residuary air were then mixed with three of pure air, and fired by an electric shock. The bulk of the mixture was then reduced from 1 inch to .56. From these facts it seems probable, that animal hepatic air consists of a combination of heavy and light inflammable air; and that, when it is fired with a quantity of pure air not sufficient to saturate it, a portion of the animal air is resolved into its elementary principles, in consequence of which its bulk is increased.

It appeared, that when alkaline and pure air were immediately mixed together, and a small shock was made to pass through them, they would not take fire; but when three or four shocks were previously passed through the alkaline air, and the latter mixed with an equal quantity of pure air, they exploded with great violence. The residue, when cooled, was reduced to half the original bulk of the mixture. Of this residue, one sixth was undecomposed alkaline air; the remainder was phlogisticated air.

Dr Crawford then proceeds to examine the products which result from the combustion of sulphureous hepatic, with pure air. The hepatic air employed, was procured by adding marine acid to an artificial combination of sulphur and iron.

Three measures of this air were mixed in a strong glass tube over mercury, with four of pure air, and fired by an electric shock: the airs were reduced to one fourth of their original bulk. The residue, when filtered, occasioned a copious precipitation from vitriolated silver and muriated barytes; but when added to lime water, no sensible precipitation was produced.

produced. Although this last fact does not prove, that no fixed air existed in the residue, because the marine acid, which it evidently contained, would dissolve the calcareous earth of the lime water ; yet, as a great diminution resulted from the combustion, and as it appeared from chemical tests, that the residue was principally composed of marine and vitriolic acid airs, it is evident, that if any fixed air was produced, its quantity must have been very inconsiderable.

Hence it appears, that when sulphureous hepatic, and pure air, are fired together in the above proportions, the products are, fixed vitriolic, with a small quantity of volatile vitriolic, and marine acids, in an aerial form. The residue, which the distilled water did not absorb, was the phlogisticated air, that existed in the pure air previously to the combination.

From subsequent trials it appeared, that when hepatic and pure air were fired in equal bulks, the residue had a strong odour of volatile vitriolic acid, and moreover contained a small proportion of undecomposed hepatic air. These facts seem to prove, that the conversion of sulphur into volatile, or fixed vitriolic acid, depends

depends upon the quantity of pure air with which it is supplied. The marine acid air found in this experiment, did not appear to form one of the constituent principles of the hepatic air, but was merely diffused through it.

One measure of hepatic air was mixed, over mercury, with about six measures of atmospheric air, and fired by the electric shock. A copious precipitation of sulphur took place. The remaining air was then agitated with distilled water; the latter was filtered, and muriated barytes added, which produced a white precipitate, not dissoluble in a large quantity of water. Hence it appears, that when sulphureous hepatic air is burnt with atmospheric air, a part of the sulphur is changed into vitriolic acid, and the rest is precipitated; but when it is burnt with a sufficient quantity of pure air, the sulphur is wholly converted into vitriolic acid.

The quantity of pure air required to saturate sulphureous hepatic air, does not seem to correspond with the supposition, that the last of these fluids consists of sulphur dissolved in light inflammable air; for sulphur requires only

ly 1.43 times its weight of pure air; but light inflammable air, at least six times its weight of pure air to saturate it. The specific gravity of hepatic, is nearly equal to that of pure air. If, therefore, one sixth of the weight of hepatic, consisted of light inflammable air, that fluid would require, for its saturation, 2.26 times its weight of pure air; but the quantity of pure air necessary to saturate one measure of hepatic air, is only 1.33 measures. It is, therefore, a more probable inference, that hepatic air is sulphur which has acquired an aerial form, by the application of heat. This Dr Crawford has also confirmed by experiment.

One measure of impure hepatic air, containing a considerable proportion of fixed air, was introduced into a slender graduated tube, over mercury, and was mixed with an equal bulk of alkaline air. As soon as these airs came into contact with each other, a white cloud was produced; the mercury rose gradually in the tube; and, at the end of six hours, the air that remained occupied only the space of a measure and a third. The surface of the mercury within the tube, first became black, and part of it afterwards assumed a red colour.

Mr

Mr Cruckshank, who assisted in most of these experiments, found, that the red and black powders, which were formed by the action of the hepatic air on the surface of the mercury, were *Æthiops mineral* and *cinnabar*. In the course of the experiment, an oleaginous substance was deposited upon the interior surface of the tube, at first of a yellowish colour, but gradually assuming a deeper cast, till at length it became green. It was very fetid, and appeared to have a near resemblance to an animal oil which had become green by putrefaction. It was, however, soluble in water; and the odour of the solution was increased by the vitriolic, and destroyed by the concentrated nitrous, and dephlogisticated muriatic acids.

Dr Crawford next treats of the air extricated from animal substances by putrefaction.

In the beginning of July 1789, about two ounces of veal, slightly putrid, were introduced into a large phial, filled with distilled water, and inverted over a quantity of the same fluid. At the end of three days, a few bubbles of air had appeared at the bottom of the phial, the water acquired a light brown

colour, and emitted a fetid smell. From a dissolution of part of the veal, at the end of seven days, it acquired the consistence of a thin mucus. From nitrated silver, it produced a dark brown; and from lime water, an ash-coloured precipitate. Concentrated nitrous acid destroyed the smell, produced a slight effervescence, and disengaged a yellow flaky matter. At the end of seven weeks, two drams and one sixth of air were collected in the phial; it was fetid, and, when agitated with water, six tenths were absorbed. The residue extinguished flame.

On the 28th of July 1789, two drams and 24 grains of the lean of fresh veal was introduced into a narrow jar, filled with, and inverted over mercury. On the 13th of September, a little more than two ounces, of a very fetid air, was disengaged. When agitated with distilled water, it was reduced to one sixteenth of its original bulk: the residue extinguished flame. Distilled water, saturated with it, produced, upon the addition of nitrated silver, a dark-coloured precipitate; and an ash-coloured cloud, when mixed with lime water. The veal had not lost its firm texture; its smell was putrid, but not very offensive.

From

From these experiments it appears, that the aerial fluids extricated from the muscular fibres of animals, consist of fixed, and animal hepatic, mixed with a very small proportion of phlogisticated air.

Dr Crawford then proceeds to treat of the effects produced by exposing fresh animal substances to atmospherical, hepatic, and pure air.

Two drams of veal were exposed, over mercury, in as similar situations as possible; the one to atmospherical, and the other to hepatic air. In three days, that in contact with the common air, had not altered its colour or consistence, but smelled a little putrid. The colour of the fatty parts exposed to the hepatic air, was changed to a dark green; the muscular fibres were cracked and shrivelled on the surface, as if they had been seared with a red-hot iron; and the whole had acquired a soft consistence.

Similar trials were made with two pieces of fresh veal; the one was exposed, over mercury, to common air; the other, to air extricated from putrid veal, by distillation. The latter, in three days, had become green round the edges, and was interspersed with green spots: the surface of the mercury had acquired a

brown colour : it continued nearly in this state for six weeks. The air, at the last, was very fetid, occasioned a copious precipitate in lime water, was highly inflammable, and burned with a blue lambent flame.

On the contrary, that exposed to the common air, did not so soon lose its fibrous texture, nor so speedily acquire a dark colour ; but the progress of its putrefaction did not appear to stop so soon. It advanced slowly ; and at the end of six weeks, a considerable part of the muscular fibres had run down to a brown liquid. The air in which it was placed now occasioned a copious precipitate in lime water ; and the brown liquid was found to be impregnated with animal hepatic, and fixed air.

In the month of December 1789, equal portions of pure and common air, were introduced into equal jars, over mercury, in each of which was placed about two drams of fresh beef. At the end of a week, that exposed to the pure air had become highly putrid, while that in the common air had undergone very little change.

The facts which have been ascertained by the preceding experiments, appear to lead to the

the following conclusions respecting the process of putrefaction in the lean of animal substances.

The muscular fibres contain fixed and phlogisticated air, the inflammable principle, in the state of heavy and light inflammable air; and a substance which, by means of heat or putrefaction, is capable of being converted into animal hepatic air. When the muscular fibre, after the death of the animal, is exposed to the pure air of the atmosphere, the latter, by a superior attraction, combining with the heavy inflammable air, produces fixed air, and at the same time furnishes the quantity of heat necessary to the formation of animal hepatic air. The cohesion of the fibre being thus destroyed, the fixed, as well as the light inflammable and phlogisticated air, which enters into its composition, are disengaged; and the two latter fluids, uniting with each other, produce the volatile alkali.

The alterations which take place in putrefaction, are in most respects similar to those which arise from destructive distillation. Dr Crawford has found, that the fetid odour of animal hepatic air is destroyed, by suffering it

to remain some weeks in contact with pure air, or by agitating it with vinegar, or concentrated vitriolic acid. But this effect is most speedily produced, by the concentrated nitrous, or dephlogisticated marine acid, both of which are known to abound with pure air. It is therefore probable, that this alteration depends upon an union between the pure air of these fluids, and the animal hepatic air, or some of its constituent parts.

It appears, that the animal fibres, in cancerous and other malignant ulcers, undergo nearly the same changes which are produced in them by putrefaction or destructive distillation. The purulent matter, prepared for the purposes of healing the ulcer, is, in such cases, mixed with animal hepatic air, and volatile alkali. The compound, formed by an union of these substances, which may perhaps not improperly be called hepatised ammonia, has been found to decompose metallic salts, and act upon metals. This accounts for the change produced in metallic salts, when applied to malignant ulcers.

From the foregoing experiments it likewise appears, that animal hepatic air imparts to the
fat

fat of animals, recently killed, a green colour, renders the muscular fibres soft and flaccid, and increases the tendency to putrefaction. It is, therefore, septic; and hence it is probable, that the hepatised ammonia found in the matter discharged by the open cancer, produces deleterious effects. For although the mischief in cancerous ulcers seems principally to depend upon a morbid action of the vessels, whence the unhealthy state of the matter discharged by such ulcers is supposed to derive its origin; yet, from the corrosion of the coats of the larger blood-vessels, and the obstructions in the contiguous glands, there can be little doubt that this matter aggravates the disease. The experiments recited above, appear to prove, that the hepatised ammonia is the ingredient which communicates to the cancerous matter its putrid smell, its greater thinness, and, in a word, all the peculiar properties by which it differs from healthy pus.

From these considerations it was inferred, that a medicine which would decompose the hepatised ammonia, and destroy the fœtor of the animal hepatic air, without, at the same time, increasing the morbid action of the ves-

fels, would be productive of salutary effects. The fetor of hepatic air is not destroyed by the nitrous acid, unless when highly concentrated; and in this state, it speedily corrodes animal substances. But the fetor of hepatic air quickly disappears, when it is mixed with the dephlogisticated marine acid, even when so much diluted with water, as to render it a very mild application. Dr Crawford has found, that this acid, mixed with thrice its weight of water, gives but little pain, when applied to ulcers that are not very irritable; and in several cases of cancer, it appeared to correct the fetor, and produce a thicker and more healthy pus. It is proper, however, to remark, that other cases occurred, in which it did not seem to be attended with the same salutary effects. Some cancerous ulcers, indeed, are so extremely irritable, that applications which are at all of a stimulating nature cannot be ventured on; and hence, if the observations which he has made on the efficacy of this acid, as an external application, should be confirmed by future experience, it must be left to the judgment of the surgeon to determine both

both the degree of its dilution, and the cases in which it may be employed with advantage.

The dephlogisticated muriatic acid has the power of destroying the colour, smell, and perhaps the taste, of the greater part of animal and vegetable substances. It corrects the fetor of putrid flesh; and Dr Crawford has found, that, when poured in sufficient quantity upon hemlock and opium, these narcotics speedily lose their sensible qualities. As it appears, therefore, to possess the power of correcting the vegetable, and probably animal, poisons, it seemed not unlikely that it might be useful as an internal medicine. Conceiving that its exhibition would be perfectly safe, Dr Crawford took twenty drops of it diluted with water. A train of disagreeable symptoms, however, soon afterwards occurred; but which were manifestly produced by a small portion of lead contained in the manganese which was made use of in the preparation of the acid. If, therefore, this acid should hereafter be employed as an internal medicine, it would be necessary to prepare it by means of manganese that has been previously separated, by a chemical

mical process, from the lead, and other metals with which it is usually contaminated.

Whether the theory here proposed, with regard to the peculiar nature of cancerous virus, be well founded or not, yet the candid reader will readily allow that it is supported with much ingenuity, and deserves serious attention. And we cannot conclude our observations on this subject, without expressing a sincere wish, that the practice which this theory has suggested, may be confirmed by experience.

X.

*Observationes de Epidemica Constitutione anni
1789, in Civico Nosocomio Viennensi. Auc-
tore Aloysio Careno, Phil. et Med. Doct.
12mo, Viennæ.*

THIS treatise contains a short description of a prevailing catarrh, and of a putrid bilious fever. Dr Carenus observes, that, to a very warm and dry Summer, in the year 1788, producing frequently very profuse sweats, there succeeded a blowing autumn, which ushered in very early cold in the winter. These sudden changes of temperature, in our author's opinion, were the cause of a very epidemic catarrh, so fatal, that, without distinction of age or sex, it carried off near one half of those, among the lower class, who were afflicted with it. As Dr Carenus, at that time, practised in the hospital, he had many opportunities of observing it very particularly. And the deaths
of

of many of his medical associates, who fell victims to the disease, did not deter him from paying such attention to the course of this affection, as he thought necessary for communicating a faithful description of it to the public.

In the commencement of this affection, the patient complained of a slight pain, or rather sense of weight, in the head. But it soon became more severe, when he was affected also with general lassitude, roughness of the fauces, and some degree of hoarseness. These were attended with anorexia, and dry cough, sometimes with, sometimes without, fever. But when fever, at this period, took place, it was neither violent nor constant. The urine, at the commencement of the affection, was light-coloured; but, in the course of the disease, it became darker, depositing a furfuraceous sediment.

These symptoms were, in general, protracted to the third or fourth day; and, if proper treatment was employed, the disease had a favourable termination. But those who paid little regard to them, soon fell into a more obstinate

stinate and dangerous affection, than could have been expected from such a commencement.

Those who confined themselves to bed from the commencement, and drank plentifully of diluent pectoral decoctions, had, for the most part, a conclusion of the disease, by a copious sweat, on the third or fourth day. But if, at this time, proper means of cure were neglected, they became affected with distressing dry cough through the greater part of the night, with excruciating headach, and with severe pain in the sternum, and in all the joints. At the same time, there in general took place a discharge of thin mucus from the nose and mouth. But if the sputum became thick, and there took place a copious discharge by sweat, urine, or stool, all these severe symptoms soon vanished. Not unfrequently, however, they paved the way for a phthisis, proving speedily fatal.

The cure consisted chiefly in employing copious emollient diluents, from the commencement, and in confining the patient to bed, or at least to his bed-chamber. With the plethoric, it was sometimes necessary to let blood; but the blood was not found to differ from the
natural

natural appearance. It was also often necessary to keep the belly open by glysters ; and, when the cough was very distressing in the night, the pediluvium was frequently of great use.

In the more obstinate cases, it was necessary to carry the antiphlogistic plan still farther ; and blood-letting was necessary, to the third or fourth time.

Dr Carenus next describes the putrid bilious fever, an affection, he tells us, of a still more dangerous tendency. This disease, in the beginning, often put on the appearance of other affections, particularly of inflammatory or rheumatic fevers, and sometimes even of intermittents. The greater part of the sick who came into the hospital, complained of a pain in the head or loins, sometimes fixed, sometimes wandering. Others, in place of headach, were affected with vertigo, attended with cough, difficulty of breathing, and pains in the joints. To these succeeded the bilious symptoms, first distinguished by a bitter taste in the mouth, and uneasiness at stomach. These symptoms were soon followed by nausea, oppression, and vomiting. There was a burning heat of the
skin ;

skin; the pulse, formerly hard and strong, now became soft, but quick and weak; and the febrile symptoms, before slight, now became very distressing. The fever had sometimes the type of a continued, sometimes of a remittent; and, when it was of this latter kind, it was, for the most part, attended with an evening exacerbation. When the patients were directed to draw a full inspiration, many of them complained of excruciating pain in the region of the stomach, and their strength failed so much, that they could not stand erect even for a few minutes.

In the course of the disease, particularly about the seventh, ninth, or tenth day, subfultus tendinum often came on; the pulse became weaker; there was a still greater prostration of strength; and much delirium, with sopor, were superadded. In some, petechiæ appeared; in particular instances they were confined to the breast alone, in others extended over the whole body. With these symptoms, the urine was in general turbid; but sometimes it deposited a furfuraceous sediment. Many were affected with hæmorrhage from the nose; but it never afforded any relief, and the discharge,
in

in general, rather resembled the washings of flesh, than blood. Involuntary stools, frequent and strong subsultus tendinum, constant delirium, a black tongue, watery eyes, remarkable fetor from the body itself, oppressed breathing, and a tympanitic swelling of the belly, were indications, our author thinks, not only of the danger, but also of the putrid nature, of the disease.

This fever was highly contagious ; and, after being introduced into the hospital, both nurses and medical practitioners were affected with it ; and, among these, three physicians, and two surgeons, of eminence, fell victims to the disease. Neither phthisical patients, pregnant women, nor those who came into the hospital with wounds, were excepted from it ; and it continued for about the space of three months ; during which period, of one hundred and thirty-five patients, seventy were affected with it. About the middle of March, this fever began to remit, and gave way to others of a more simple form. It deserves to be remarked, that during the prevalence of this fever, from the beginning of December to the end of May, though diseases of different kinds appeared,

appeared, there were scarcely any instances of real pleurifies or peripneumonies, though these often appeared during that season in former years.

Among the vulgar, in particular, this disease much more frequently affected young men, and those about the middle periods of life, than infants, or old people.

Besides the influence of contagion, many other causes were likewise assigned for this disease. Our author is of opinion, that the immoderate heat of the summer probably contributed not a little to this epidemic constitution; that the viscera, debilitated by this means, could not properly exert their functions; and that thus a foundation was laid for gastric crudities, and bilious affections. He thinks also that, with the poor, alkalescent, indigestible animal food, as well as their small, ill-aired, and moist habitations, may have had some influence.

The duration of this disease was irregular, sometimes long, sometimes short. Copious blood-letting was in general observed either to protract the disease, or to produce a fatal termination. If the disease was neglected in the beginning,

medical assistance was but of little avail ; but if properly treated from the commencement, it was both of shorter duration, and less dangerous. The longer the inflammatory symptoms were protracted, the more was the danger augmented ; and from this circumstance alone, blood-letting, performed in a sparing manner, seemed sometimes to have a good effect.

Those who had been once or twice previously attacked with catarrh, were in very great danger ; and if those labouring under phthisis were subjected to this fever, it was almost certainly fatal. If, on the sixth or seventh day, the cloud in the urine subsided, and the skin became less dry, a favourable termination for the most part took place about the ninth, fourteenth, or twentieth day, either by urine, or sweat. When a cough took place, if this symptom suffered an exacerbation about the sixth, seventh, or eighth day, this was, for the most part, followed by a copious, thick, white sputum, and an increase of other secretions, terminating in recovery. If clammy sweats took place about the fifth or sixth day, or later, without producing relief of the delirium,

rium, they were justly considered as a bad omen.

The occurrence of a petechial eruption, neither relieved nor aggravated the disease. But if, from irregularity in diet, convalescents were subjected to a relapse, the danger was in general so great, that two out of three perished. There was, according to our author, no difference in the prognosis, whether the disease evidently arose from contagion, or from any other cause, either known or unknown.

After these observations on the prognosis, before proceeding to the cure, Dr Carenus relates the history and treatment of several cases, with a view still farther to illustrate the progress of this epidemic. Among these, he relates the case of Dr de Vigilliis, first physician to the hospital at the time when this epidemic began to prevail, and on whom Dr Carenus bestows very high encomiums. From this history it appears, that in the course of his disease, with a weak and intermittent pulse, livid petechiæ, and a black tongue, convulsions supervened; and the disease terminated fatally on the twelfth day, notwithstanding the liberal

use of Peruvian bark, wine, serpentaria, and camphor.

After relating the histories of some remarkable cases, Dr Carenus concludes his treatise with some observations on a few particular remedies. With regard to blood-letting, he observes, that it is very ill adapted to bilious putrid fevers in general, although, in plethoric subjects, and when there is a complication with inflammatory affections, it is proposed and recommended by almost every practitioner. Though the state of the pulse, difficulty of breathing, and pain in the side, continuing even for several days, seemed to require it, yet, when the character of the epidemic became manifest, it was found necessary to draw blood only with a very sparing hand; for the strength very soon failed, and the pulse sunk so fast, that after taking two or three ounces, it became necessary to stop. Nor can reliance here be put on the appearance of the blood itself, unless in conjunction with other particulars. When necessity, however, requires, blood-letting is not to be neglected; but the person prescribing it should always be present, that he may judge of the proper extent of the
discharge

discharge by the state of the pulse : and, in general, scarification and leeches are preferable to general blood-letting.

To the use of emetics, also, he observes, that several objections have been started. The appearances of inflammation which often took place, may, he thinks, be considered as contraindications to the employment of them. Besides, so long a period had in general elapsed before patients were brought to the hospital, that the bilious matter was not only deposited in the alimentary canal, but even absorbed. In addition to these circumstances he also adds, that the tendency to hæmoptoe is very frequent at Vienna, which has been considered also as an objection to emetics ; and upon the whole, it has, he observes, been thought, that all the purposes to be answered by them, may in general with more advantage be obtained by means of saline purgatives ; but, notwithstanding these objections, he is still inclined to think, that they may be frequently employed with advantage. As to the proper time of exhibiting emetics, he observes, that a very long detail would be necessary fully to explain it : but he thinks, that when symptoms are urgent, they

may be employed at any period of the disease; at least, he has found from experience, that they may be given with advantage, not only on the sixth and seventh day of the disease, but on the tenth, and even later.

Of the benefit to be derived from Camphor, he entertains a very high opinion, provided it be given in due time. Sometimes the good effects of it are lost, by its being exhibited too late. Though the fever has belonged to the simple bilious ones, yet where a state of great debility takes place, he has ever given it with great advantage. Under its use, the strength is, he observes, increased; the stomach becomes stronger; and nature, improved, is able to sustain the concoction of the disease.

Authors, he observes, have differed much, both as to the time of exhibiting it, and the quantity to which it ought to be given; some advising it to the extent only of two or three grains, others of as many drams. In the hospital, his practice was to employ it to the extent of six, eight, or ten grains, and to repeat it according to circumstances. It was sometimes given mixed with sugar; but, in general, he found it more easily taken under the form of mixture.

After

After some observations on critical days, the existence of which he is disposed to admit, he makes a few remarks on the Peruvian Bark. He seldom employed the bark till the eleventh day, lest, by its means, a fomes, inimical to the body, should have been retained; but, after sufficient evacuation of this fomes seemed to have taken place, recourse was immediately had to it. It was prescribed under the form of decoction, with the addition of extract, to increase its powers. But the bark was shunned even late in the disease, when there was severe cough, and a strong pulse; lest, from its employment, these symptoms should be aggravated. Recourse was had to emollients and demulcents, till the cough was diminished.

XI.

A Dissertation on Suspended Respiration, from Drowning, Hanging, and Suffocation; in which is recommended, a Mode of Treatment different from any hitherto pointed out. By Edward Coleman, Surgeon. 8vo, London.

MR Coleman introduces his subject, by some observations on the solid and lasting gratification which arises from restoring life to those who are apparently dead; and he points out the progress which has lately been made, in ascertaining the principles on which this important end can best be accomplished. This progress is, he thinks, not a little to be attributed to the Humane Society of London. In the year 1787, that Society proposed a prize-question on the nature of the diseases produced by Submersion, Suspension, and Noxious Airs.

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This question gave rise to the publication of two dissertations of peculiar merit, those of Dr Goodwyn and Mr Kite, both of which were honoured with prizes. But notwithstanding the light thus thrown upon the subject, it was still to be regretted, that many doubts and difficulties remained, and that the conclusions drawn from their observations and experiments, were in some particulars opposite, and even contradictory. Still farther, therefore, to elucidate this subject, the Humane Society proposed, as a future question, Whether Emetics, Venesection, or Electricity, be proper in suspended animation, and under what circumstances? To this question the following dissertation is an answer; and the Society's medal was voted to the author of it.

Mr Coleman, however, who, as well as Dr Goodwyn, makes some objections to the term Suspended Animation, as being less proper for conveying the idea intended, than Suspended Respiration, did not confine his observations merely to answering the different particulars proposed in the question stated above. That we may be enabled to form a just estimate of the comparative efficacy and importance of the
different

different means of cure pointed out, he thinks it first necessary, not only to describe the phenomena of departing life, and the appearances on dissection, but to view the subject also in a pathological light, and to consider that peculiar condition of the animal, which forms the proximate cause of the disease.

In pursuance of this plan, he begins by describing the common effects of Drowning. After describing the successive expirations, with fruitless efforts to inspire, which take place during drowning, he observes, that on opening the chest, the two *venæ cavæ*, the right sinus venosus, auricle, ventricle, and pulmonary artery, are found loaded with blood; the left auricle nearly distended; the left ventricle about half; the aorta and its branches, containing a quantity of blood, which in all its appearances resembles venous. The lungs are discovered in a state of collapse, containing a small quantity of water in the form of froth, but very trifling when compared to the quantity of air expelled from the lungs during the act of drowning.

From this general account it appears, that the quantity of blood contained in the right
side

side of the heart after drowning, was greater than that in the left. This led Mr Coleman to institute some experiments, with the view of determining the exact proportion in which this takes place. And although, upon different trials, the quantities varied, yet it was found, that, at a medium, the proportions of the right side were to the left as $3\frac{2}{8}$ to $1\frac{6}{8}$. The lungs were uniformly in a collapsed state.

After Hanging, as well as after Drowning, Mr Coleman found, that the lungs were collapsed, the right side of the heart overloaded with blood, the left auricle not quite distended, the left ventricle about half. The aorta, and its branches, contained blood, in quantity and colour, similar to that from drowning. In cases both of hanging and drowning, the peristaltic motion of the intestines did not continue so long as the action of the heart, which, in some cases, vibrated for an hour or two after respiration was suspended, but, in other cases, did not continue its vibration one tenth of that time.

When animals were immersed in any air unfit for respiration, it has in general been supposed, that it was both taken into their lungs,
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and again expelled ; during which process, a deleterious effect was produced in the system, which terminated in death. But Mr Coleman tells us, that the lungs are found equally collapsed in those animals destroyed by noxious air, as in those which have been drowned. In both cases, the first expiration is by no means sufficient to exhaust the lungs. The animal attempts to inspire, but, from the improper element, the epiglottis closes. Air continues to be expelled, and new attempts are made to inspire ; but the trachea being irritated by the noxious air, little or none enters the lungs, and, after the last expiration, they admit no more. And accordingly, here also he found, by several experiments, that the quantity of air remaining in the lungs was very inconsiderable.

When animals were killed by noxious air, Mr Coleman found, that the irritability of the heart continued but little longer than the peristaltic motion of the intestines, and that both ceased sooner than in animals destroyed by hanging or drowning. In some animals destroyed by nitrous air, the heart ceased to contract, from its own stimulus, in less than four minutes.

minutes. From these circumstances, Mr Coleman thinks himself warranted to conclude, that the air in which the animals were immersed, contributed to destroy their irritability.

Mr Coleman next presents us with some observations on the physiology of the lungs and heart. Here we find him a strenuous advocate for the opinion of Dr Crawford, that the principle purpose of respiration is for the generation of heat ; while with much ingenuity he opposes several of the tenets of Dr Goodwyn, particularly his assertion, that there is something peculiar in florid blood, which alone is capable of exciting the left side of the heart to action.

In treating of this subject, he attempts to prove, by some experiments, and much ingenious reasoning, that the principal advantage derived from respiration is, that of its being the source of animal heat ; and that this heat, by being evolved in a sensible form, keeps up the irritability of the whole animal ; that the blood contains more or less latent heat, in proportion to the degree of sensible warmth applied to the surface of the body ; that as
soon

soon as the blood has undergone a change of colour in the lungs, it is rendered fit for supporting the heat and irritability of the animal; that heat is not only evolved from the blood, as it passes through the capillaries, but that the same process continues through the whole circulation; and that the stimulus which excites the heart to act, is the same in all its cavities, and is principally distension.

After many ingenious remarks on the foetal blood, which, though black, stimulates both sides of the heart in that state of the system, he endeavours to show, that, in suspended respiration from drowning, &c. the right side of the heart continues to act, after the left has ceased; that the reason of this difference is not, that the heart is incapable of being stimulated by black blood, but that it arises from this blood being essentially different in quality from that of the right; and that, from the greater sensible heat in the blood of the right auricle and ventricle, the irritability of these organs will of course be greater.

He contends also, that as the right side of the heart not only possesses more irritability than the left, but as the stimulus of distension
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is also more powerful at the right side than at the left, the former will be capable of continuing its action, when no effect is produced on the latter. He admits, however, that, as soon as the action of the left side of the heart is increased by the stimulus of florid blood, the right also acts more powerfully.

He observes, that electricity is capable of producing the action of the heart, when it has no effect on the exterior parts; and that as life still actually exists, it would lead to the most pernicious consequences to conclude that life was totally extinct, from no external action being produced by electricity.

Mr Coleman tells us, that electricity has been found incapable of producing external action, when the heat of the animal was much above the temperature of the surrounding medium. Hence he concludes, that animal heat, and evident irritability, are by no means in the same proportion. But although this be not the case, he still thinks, that the greater the degree of heat is, the more will be the irritability of any particular animal. And he infers, that as the heart is to be considered as the origin of circulation, there is a probability
of

of recovery, as long as the heart can be made to act. He contends, that when the lungs are inflated soon after the last expiration, both sides of the heart will immediately act; and that this probably proceeds from the irritability of the heart being still so great, as to be stimulated to action by the mechanical irritation of the lungs; because, in proportion to their expansion, their surfaces must press upon the two sides of the heart.

After these physiological observations respecting the action of the lungs and heart, Mr Coleman next proceeds to attempt to ascertain the proximate cause of the disease in cases of Drowning, Hanging, and Suffocation. After briefly mentioning the opinions of those who attribute death, in such cases, either to the air contained in the lungs becoming highly phlogisticated, and thus proving fatal; or to a congestion of blood formed in the heart and lungs; or, finally, to apoplexy; he proceeds to a more particular examination of the theories lately proposed and supported by Dr Goodwyn and Mr Kite; and he endeavours to show, that the suspension of circulation neither proceeds, as the one has supposed, from
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the presence of black blood in the left side of the heart ; nor from the want of motion in the lungs, as is alleged by the other. And after thus endeavouring to refute the most fashionable hypotheses lately broached on this subject, he attempts to shew, that a collapse of the pulmonary vessels, producing a mechanical obstruction to the passage of the blood, is the immediate cause of the cessation of circulation; and, consequently, of death. He therefore concludes, that the proximate cause of the disease may be said to consist in a collapse of the lungs, producing a collapse of the pulmonary vessels, with want of latent heat in the blood ; and that both these must be removed, before the disease can be overcome.

Mr Coleman, after having stated his opinion respecting the proximate cause of the disease, which takes place in cases of suspended respiration, next proceeds to deliver his sentiments respecting the effects of the different remedies mentioned in the question proposed by the Humane Society. Of each of these he treats separately, beginning with the consideration of Emetics. He considers Emetics as being the most ineffectual of all the reme-

dies which have been proposed; and the employment of them must, he thinks, ever be attended with considerable injury, if they be had recourse to before the action of the vital functions be restored. From experiments which he here relates, it even appears, that large quantities of emetic substances introduced into the stomach, though productive of no effect while respiration continues to be suspended, will yet be followed by fatal consequences, after a recovery has been effected by other means. He considers them, therefore, as being admissible only after circulation and respiration have been re-established; and he thinks, that, even then, they should be exhibited in those cases alone where the stomach is known to have been overloaded previous to the accident producing the disease.

With regard to blood-letting, Mr Coleman is of opinion, that if it were possible to take blood from the part where we know it superabounds, it would prove one of the most immediate and efficacious means of recovery. But it is not in the power of art immediately to abstract blood from the right side of the heart, which is always overloaded, and sometimes

times even ceases to act from over-distension. From bleeding, therefore, as a general remedy, little advantage can be expected. In cases where, from the former condition of the patient, we have reason to presume that a general plethora previously existed, it may, he thinks, be serviceable, to diminish the excess of blood that loaded the system. When blood-letting is deemed necessary, it should, Mr Coleman thinks, be one of the first means of recovery to which we should have recourse. But in those cases where there is not sufficient blood in the system to furnish a fresh supply to the right side of the heart, instead of promoting the good effects of other remedies, it may totally frustrate, or at least retard them. After Hanging, however, blood-letting is, he thinks, more frequently necessary, than after Drowning or Suffocation, particularly in those cases where general plethora is united with bulk and weight; for although apoplexy, he thinks, can never happen from this cause, yet in such cases there is more than the natural quantity of blood in the head. Blood, in such instances, should, he thinks, be abstracted from

the jugular veins, in preference to any other vessel.

The effects of electricity and of artificial respiration, are next considered, both separately and conjoined. He is of opinion, that very considerable mischief may frequently ensue from the employment of Electricity, in the manner it has often been recommended. By stimulating the heart, without at the same time removing the mechanical obstruction in the lungs from collapse, a destruction of its irritability must follow without any advantage, as the circulation cannot effectually go on.

Equally little benefit is, he thinks, to be derived from inflating the lungs, and, immediately after, pressing the chest, which has been recommended as an imitation of natural respiration : at least, if this be productive of any benefit, it is only in consequence of the heart being excited to action during the expansion of the lungs. The treatment which, he thinks, should obviously be pursued is, that we should first expand the lungs, and when the collapse is removed, stimulate the heart by a shock of electricity. From this the heart may be made to contract, while there is a free passage for
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the blood, and air in the lungs, to produce a change. The lungs should then, he thinks, be perfectly collapsed, by which the blood will be conveyed into the trunks of the pulmonary veins, and left auricle, and circulation go on. Inflating the lungs, and electrifying the heart at the same time, may at first view, he observes, be thought a difficult and embarrassing process. But, by instruments properly constructed for the purpose, he has found that this may be very easily accomplished.

Where no electrical apparatus is in readiness, the lungs should still be distended; and, after a small quantity of air is allowed to escape, the inspiration should be repeated, and continued in this manner about a minute, before the lungs are completely exhausted; so that there should be but one complete expiration to several inspirations. But during the whole process of the treatment, the lungs, he tells us, should never be suffered to remain in a collapsed state for a single minute.

We are next presented with some observations on the effects of warmth. The gradual application of warmth has been by many strongly recommended; and Mr Coleman ob-

serves, that it would be presumptuous to deny, that the observations in support of it are well founded ; but he thinks, that the analogy between death from drowning, and from the application of cold, has been carried much farther than is well founded ; for in the one, he considers the vital principle as being affected merely by a sedative power ; in the other, he views life as being endangered by a collapse of the lungs. He agrees perfectly, however, with Dr Goodwyn and others, that warmth is essential, but that it should neither be suddenly nor irregularly applied. He thinks, however, that it is by no means allowable, as some have advised, to wait for an increase of heat in the interior parts before the lungs are inflated. Nay, he thinks it even impracticable to increase the internal heat before this end be accomplished, unless irritability be absolutely destroyed.

With regard to the degree of heat, seventy of Fahrenheit's scale is, he thinks, as much as should ever be applied. Any degree above this, produces, he thinks, a waste of strength, which it should be our endeavour to support. For the application of heat, recourse has been
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had to the warm bath, warm grains, and the like. But as these are seldom easily obtained, and interfere with other practices, he thinks it more adviseable to place the patient on a mattress, or bed, at a proper distance from the fire, where every other operation that may be thought proper can be carried on at the same time.

With regard to frictions, he thinks it can hardly be doubted, that they have contributed in many instances to frustrate the most successful treatment, by producing an over-distension of the right side of the heart. But as soon as the right side of the heart has been enabled to rid itself of a portion of its contents, we should then, he thinks, proceed to frictions, as a substitute to the natural action of the arteries, and as a means of propelling the blood forward. He thinks it particularly necessary, that electricity should be conjoined with frictions; but when, from any cause, we are prevented from electrifying, he thinks we should be sparing in the use of frictions, lest, by an over-distension, we destroy the action of the heart.

From frictions made use of as a stimulant, he is of opinion, that little or no advantage can be expected; and he condemns, in very strong terms, friction with salt, brandy, volatile alkali, vitriolic acid, or the like, as well as the application of stimuli to the nose and eyes, or tongue, scarifications, actual cauteries, or the like. With the view of preventing excoriation, he recommends, that with the frictions, a little common oil, or lard, should be employed; and he advises, that they should be chiefly applied to the upper and lower extremities.

The last subject of which he treats, is the effect of Enemas. The practice of injecting tobacco smoke into the rectum, in cases of suspended respiration, he reprobates in the strongest terms. He considers it as exhibiting a poison, which operates by producing such an extreme degree of debility as no powers of life can support; and he thinks, we might with as much propriety recommend tobacco in syncope, or in typhus fever, as in suspended respiration from drowning; and his opinion on this, as well as many other particulars, he attempts also to confirm by experiment. Warm injections may indeed, he allows, have the salutary

lutary effect of slightly stimulating the intestines, and, by sympathy, the heart also. But enemas should always, he thinks, be of small bulk, since smoke, and fluids of all kinds, when given in large quantities, will distend the intestines, and thus prevent the easy descent of the diaphragm. And upon the whole, he thinks, that more benefit may be expected from injecting some warm aromatic into the stomach, than into the rectum.

Having thus particularly examined the comparative merit of different practices, Mr Coleman concludes this treatise, with a brief account of the mode of cure which he would recommend, placed in a nearer and closer point of view. It is, in the first place, requisite, that no persons should be present but those who are absolutely necessary, which, he thinks, should not exceed eight or nine in all. The body, if wet, should be gently dried with cloths, but in so cautious a manner, as to prevent the mechanical effect of the friction from propelling the blood towards the heart. Having prepared a bed, or mattress, on a table of convenient height; the body is to be placed on it, with the head a little elevated. Five or
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six ounces of brandy, rum, or some other warm aromatic, should be thrown into the stomach, by means of the vegetable bottle and pipe, and the ivory director passed to the further part of the mouth, so as to close the superior aperture of the œsophagus.

If the patient seem plethoric, and more particularly if the disease have been occasioned by hanging; bleeding should be employed, and that as one of the first remedies; nor should the application of a proper degree of warmth be neglected.

The curved pipe being then introduced into the trachea, and secured by an assistant, and the flexible tube, &c. being attached, the lungs ought as soon as possible to be inflated; and the electrical machine being prepared, one director is to be placed between the fourth and fifth rib of the left side, and the other between the second and third of the right, when the electrometer is to be placed a little more than one third of an inch from the jar, and the stroke given. The electrical shock is to be repeated once or twice; and the assistant, who prevented the air from escaping by the nostrils and mouth, should then remove his hands, and press the chest;

chest; but, immediately afterwards, expand the lungs, for the heart to be again stimulated.

If any impediment should prevent the introduction of the pipe down the trachea, bronchotomy should be directly performed, and the curved pipe inserted into the trachea at this aperture.

When the lungs have been three or four times expanded and collapsed, frictions are to be had recourse to: these, together with the process of expanding the lungs, and at the same time electrifying the heart, and then again collapsing them, are to be continued four hours without intermission, unless natural respiration be restored.

In some cases, where the living powers are remarkably languid, it may be adviseable to continue the use of electricity and gentle frictions, even after respiration is renewed, as there have been instances of momentary and transitory recoveries, which may be conceived to arise either from the heart not possessing sufficient irritability to carry on the circulation, or from want of a supply of blood. But both these obstacles may be removed, by assisting the heart and arteries to perform their
respective

respective functions, after the muscles of respiration have been stimulated to action.

In this manner Mr Coleman proposes that the practice should be conducted, where a proper apparatus is at hand. But where an electrical machine is not in readiness, the method of performing artificial respiration, should, he thinks, be altered. When the lungs are expanded, the assistant, who has the charge of the mouth and nostrils, should, he tells us, suffer a small quantity of air to escape, while the other assistant continues to throw in a fresh supply. It cannot, he adds, be too frequently inculcated, that the lungs are never to be suffered to remain collapsed; for all our endeavours and attempts to effect a recovery, should the lungs be permitted to continue in that state, must ultimately prove fruitless and ineffectual.

With regard to different parts of Mr Coleman's reasoning, we must own that we cannot help entertaining many doubts. But the practices on which he places the chief confidence, particularly proper inflation of the lungs, moderate warmth, frictions, and electricity, are the modes of cure from which, on
different

different theories, we may with greatest confidence look for success; and we sincerely wish, that, from the particular modes of administration which he has proposed, the benefit resulting from them may be augmented.

XII.

D. Sam. Gottl. Vogelii, *Seren. Duc. Regn. Megapol. à Consil. Aul. Med. P. P. O. in Univer. Lit. Rostoch. Diatribe Medico-politica de Causis quare tot Submersi in Vitam non revocentur. Præmissa est Historia memorabilis cujusdam fausti exempli.* 12mo, Hamburgi.

THE learned author of this essay introduces his observations, by relating a remarkable case of recovery, after apparent death had taken place by Drowning. This case, however, did not fall under his own observation; it occurred at Hamburgh, and was communicated to him by Dr Schroeder of that city, under whose direction the means of recovery were employed. In this case, although the time for which the boy was under water was not exactly ascertained, yet it was concluded, that he could not have been less than

than half an hour under water. When he was found, there was every appearance of death. His whole body was not only cold, but stiff; his lips livid, the balls of the eyes distorted, and the pupils dilated, without even the slightest appearance either of circulation or respiration. After employing means of recovery for about an hour and a half, some convulsive motions at last took place, which were gradually succeeded by other signs of life; so that, at last, a complete recovery took place. Dr Schroeder ascribes the recovery chiefly to careful friction over the whole surface of the body, and to careful inflation of the lungs; while, at the same time, venesection was avoided. And Dr Vogel is of opinion, that this case particularly deserves to be recorded, because the means of cure were so simple.

While some such cases as that before related, demonstrate the possibility of recovery, where appearances are very unfavourable, it is yet, our author observes, much to be regretted, that recoveries upon the whole are but rare. In proof of this, he mentions several large towns, in which, though drowning be very frequent, yet not a single recovery has
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taken place for several years. An inquiry, therefore, into the causes why recoveries are so rare, he considers as an object well meriting attention.

He begins by considering those causes which preclude all hopes of recovery. The first which he points out, is continuance for a certain length of time under water. From the observations made by the Humane Society of London, he infers, that patients will be very generally irrecoverable who have been three quarters of an hour under water. But it is unquestionably safer to extend the term of possible recovery, than to limit it, beyond the truth. He thinks, however, that no one can with justice be accused of neglect, though he have not recourse to any means of recovery, if the patient has been two hours, or even an hour and a half, under water. But in many instances, we know nothing of the time for which the body has been under water. If, however, in these cases there be evident marks of putridity, a cadaverous smell, and general emphysema; these, he thinks, are indubitable proofs, that the body has been so long in the water as to preclude any possibility
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of recovery. All the other marks of death which have been commonly pointed out, though many of them give a strong presumption, he considers as by themselves at least doubtful.

A second set of irrecoverable cases are those, where patients taken out of the water, have not in reality been suffocated, but have perished from some other cause of death. Many conspiring causes, at the time of drowning, may bring on fatal apoplexy, spasms, or convulsions; or death may have been the consequence of severe injuries to the head, stomach, or other very sensible parts. From these, and similar circumstances, a person who has been but a short time under water, may yet be in an irrecoverable state.

A third cause, from which cases are not unfrequently rendered irrecoverable, is the too slow application of the means of cure. In this particular, he observes, that very great improvements have of late been made, from the contrivance of proper boxes, containing all the necessary apparatus, as prepared by Pia, Gardone, Cogan, and others; and particularly, what he considers as an improvement upon all the others, that of Mr Kite. But he observes,

that, from unaccountable negligence, or indolence, several large towns, where accidents from drowning are very frequent, have never hitherto made proper provisions of this kind; and he points out his native country, Mecklenburg, and the city of his residence, Rostoch, as being very deficient in these particulars, notwithstanding the danger to which they are exposed from the river Warna. He enters also, at considerable length, into a detail of the plan by which this may be obviated.

Another cause which he points out, as not unfrequently preventing the recovery of the drowned, is, that the necessary assistance and remedies are applied either injudiciously, or without sufficient diligence. These remedies he considers as in general employed with one of four intentions, either for affording irritation, for increasing the heat, for producing depletion of the vessels of the brain and lungs, or for renewing respiration; and he gives a very full enumeration of the particular practices referable to each head. He mentions many controversies which have subsisted among the most eminent practitioners, respecting almost every article of this numerous list; and he ob-

serves,

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• serves, that as the mode of cure which is adopted, can only be successful when properly accommodated to the nature of the case, want of recovery must often arise from necessary ignorance of circumstances.

Terror, confusion, and perturbation of mind, are next pointed out as causes by which a recovery is sometimes prevented. By these, much time is often lost. From every moment, however, the danger is increased.

The last cause which he points out, as contributing not a little to render recoveries less frequent than might otherwise be the case, is the too early belief of patients being in an irrecoverable state; and, in consequence of this, the proper means of recovery not being employed for a sufficient length of time.

From the causes being thus pointed out, why so few recover from drowning, Dr Vogel imagines, that, on particular occasions at least, some of these may be successfully obviated. And he subjoins a brief account of the method of cure which he thinks ought in general to be adopted.

• In taking the body out of the water, all external injuries, and other rough treatment, are,

he observes, to be avoided as much as possible. When it has been conveyed to a proper situation, the wet clothes are to be taken off, the whole body is to be carefully dried, and the mouth and nose freed from any filth that may tend to obstruct the passage of air. The body must be placed with the head somewhat raised, in such a situation that there may be free access to it on all sides, and that its position may be easily changed. A proper coverlet, somewhat warmed, is then to be thrown over the whole body, leaving the head free. Let assistants, by introducing their hands under this covering, gently and equably rub the whole body with dry flannel cloths, impregnated with the smoke of juniper, mastich, oil-banum, or some similar substance; the cloths being carefully dried, and fumigated by other assistants.

During the time of the frictions, an attempt must be made to inflate the lungs with air, by blowing it in at the nose, or even through the glottis, by means of a proper tube. The tongue being drawn somewhat forwards, and this tube introduced, which is always much preferable to bronchotomy, inflation is to be performed,
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by a man whose lungs are strong and sound, with such force, that the air may penetrate to the extreme vessels of the lungs of the drowned person; and to accomplish this, the mouth and nostrils, excepting where the tube is introduced, must be kept carefully shut. The chest and abdomen thus raised, are to be again gently depressed; and the alternate introduction and expulsion of air regularly continued in this manner for a due length of time.

In conjunction with friction and artificial respiration, at intervals of from ten to twenty minutes, warm stimulant glysters are to be injected, impregnated with an infusion of tobacco, emetic tartar, oxymel of squills, volatile alkaline spirit, or some similar article.

If, from the continuance of this simple method for the space of an hour or upwards, no sign of life can be detected, Dr Vogel thinks, there is much reason to fear that the patient is in an irrecoverable state. Nay, he is even persuaded, that not a few will recover as effectually from being laid in a proper situation, duly covered, and gently rubbed with the hands of assistants alone, as they would do by the employment of more numerous practices:

and, whatever be the practices employed, it is necessary, he tells us, attentively to watch the first returns of life; and when any signs of life appear, every mode of cure is, for a little at least, to be laid aside; lest, by officious labour, we should disturb the more salutary operations of nature. And he observes, “*Gravis regula contra quam peccant optimi medici. Festina lente; aliquid naturæ committe, et illi confide si tempus adjuvet. Non plus mederi oportet, quam quantum vides medendum esse.*”

Dr Vogel's observations on the method of treatment in cases of this kind, are concluded with some remarks on blood-letting. Where manifest signs of apoplexy, or exuberance of blood, can be detected, and where the drowned person is of a robust and athletic habit, or where he has fallen into the water in consequence of previous inebriation, there can, he thinks, be little doubt, that in order to promote the return of life, the veins must be relieved from the load by which they compress the brain, and are deprived of their tone. But the time of blood-letting, the place from which it is to be taken, and the extent to which it is to be let, are matters of no small consequence;

consequence ; for in these particulars, he observes, errors are often committed. Where the signs of plethora and turgescence are strong, it should be performed prior to every other attempt to cure ; and when the blood freely and forcibly flows from the vein when cut, with more confidence may we proceed in the discharge ; but where the signs indicating blood-letting are not considerable, it will in general, he thinks, be proper to delay it, till, by the application of other remedies, there be appearances of returning life ; and when performed at this time with those of full habits, it has often, he tells us, been observed, that the pulse, before small and oppressed, became stronger and fuller, and at the same time respiration more free. Symptoms sometimes occur, which indicate even a repetition of blood-letting before a perfect recovery ; and he considers a repetition as requisite, where there take place violent pain of the head or breast, long continued sopor, delirium, difficult respiration, violent cough, hæmoptoe, or symptoms of peripneumony.

But if, in some cases, there be symptoms thus indicating even the repetition of blood-

letting, so, in other cases, where signs of returning life take place, it is to be as carefully shunned, lest the very primordia of life should, as it were, be discharged with the blood; and with the weak and infirm, unless from urgent symptoms, it is never, he thinks, to be directed.

When blood-letting is necessary, Dr Vogel thinks, there can be no doubt that the discharge should in general be made from the external jugulars. Where blood cannot be obtained from these, he advises it to be let from either temporal artery; for though the arteries be less distended with blood than the veins, they are more irritable; and if there be the smallest remains of life, a discharge will not fail to be obtained from these vessels. In such cases, also, he advises cupping, with scarification, to the head, the neck, and the temples, which, besides operating as evacnants, are often also useful as stimulants.

The quantity of blood to be let, cannot, he observes, be easily determined, but must be regulated by the circumstances of age, sex, constitution, and other particulars, whether ex-
ternal

ternal or internal, which indicate the employment of it.

It will often happen, that after a patient is almost entirely recovered from the effects of submerſion, ſymptoms of a different kind will ſupervene. To theſe, according to their nature and tendency, the ſkilful phyſician muſt direct proper remedies ; for without theſe, he who had but juſt eſcaped death from drowning, will, as is not unfrequently the caſe, in a ſhort time fall a victim to another diſeaſe.

Dr Vogel concludes this treatiſe, by preſenting to his readers a catalogue of the moſt valuable publications which have appeared on this important ſubject ; but he contents himſelf with merely mentioning the names of thoſe who wrote on the ſubject of ſubmerſion prior to the year 1777. Of the later publications, and even of the tranſlations into German of the writings of Cullen, Goodwyn, Kite, and other eminent Britiſh authors who have treated of this ſubject, he gives the titles at full length : and he concludes with a liſt of the dates of public edicts, iſſued by different provinces and cities, for making proper proviſions againſt accidents from drowning. We cannot help

help expressing a regret, that no British statute appears in his list ; for it is, we think, a subject which should not be entirely devolved on humane societies, or the voluntary exertions of benevolent individuals. Where the situation of cities, towns, and even villages, is such as to render frequent accidents of this kind unavoidable, it would be wisdom in the Legislature to oblige the community to make proper provisions for recovery. And we cannot help entertaining a hope, that this too long neglected subject may at last attract the attention of the British Parliament.

XIII.

XIII.

Prælectio Academica, simpliciores et salubriores comprehendens de Febris Notiones, pro annuo Munere, Cathedræ de Lege adjunto, implendo elucubrata, et sapientissimis medicis Professoribus dicata. A D. D. Josepho Pinilla Vizcayno, Doct. Med. in Majori Universali Gymnasio Complutensi, Regio Professore Primario, et Regalis Academiæ Medicæ Matritensis Socio. 4to, Compluti.

THE author sets out with observing, that the diversity which takes place in the form of Fevers, has led nosological writers to divide them into a very great variety of genera and species, insomuch that, in the writings of the late nosologists, near three hundred different modifications have been pointed out. Hence, both in the diagnostic and cure, very great difficulties have arisen to young practitioners. He thinks, however, that, with
Seneca,

Seneca, we may justly assert, that as much mischief follows from too far extended divisions, as from none. To correct and simplify our opinions on this subject, therefore, he considers as being a desideratum of importance in medicine.

The heart Dr Pinilla considers as being the *primum vivens*, that is, the first part exercising motion in the primordial stamina of the human species. The common, or public action of the heart, as he styles it, consists in its systole, or contraction, propelling the blood from its cavities into every different part of the body, through the arteries. To this follows the diastole, or dilatation, during which the heart again receives from the veins the circulating vital fluid ; and from this circulation arises, he thinks, the heat of the body. By the systolic action of the heart, and calorific circular motion of the blood, health is preserved, where the necessary aliment is not deficient.

The systolic action of the heart, however, alternated with its diastole, and accordingly most certainly marked by the pulsation of the arteries, and on this account frequently called the pulsific action of the heart, is equally, or perhaps

perhaps even more easily capable of alteration, than any other action of the body : but, chiefly, alterations are produced in the frequency of the repetition of its action in a limited time. Where morbid frequency in the repetition of this pulsific action takes place, it has been common in all ages to term that state Fever, because it very generally brings along with it, as he observes, the effects, *fervendi vel furendi aut februandi*. He thinks, therefore, that the irregularly increased pulsific action of the heart, cannot be expressed by a better appellation than that of Fever ; nor, on the other hand, can we have a clearer or more simple idea of Fever, than that it consists in such action.

As the first and following contractions of the heart, during the continuance of health, are produced in a regulated degree of frequency, by nature aiming at the preservation of life ; so an irregular augmentation of its systolic frequency, may be considered as merely a greater effort, by which nature, in consequence of the presence of some hurtful cause, or the knowledge of some imminent danger, attempts to preserve health.

But

But increased frequency of action in the heart, is not always accompanied with increased circulation of the blood, or augmented generation of heat. On the contrary, with this action diminished, heat, and weaker circulation, are not unfrequently observed. When this, however, is the case, the patient can hardly, he thinks, be said *fervere aut februire*. But this he views as being merely accidental; and as it depends solely on the defect of some requisite, it cannot be considered as any variety of nature in her conservatory principle; but, for the sake of distinction, he thinks it may be called *Febris notha, inchoata, seu imperfecta vel imminuta*. But the *vera et perfecta Febris*, he views as consisting in increased systolic frequency of the heart, with augmented circulation of the blood, and augmented heat, either in the whole body, or in some part of it, arising from the conservatory power of life; not from any chemical or mechanical stimulus, operating independently of the powers of nature.

It is, Dr Pinilla observes, the subject of daily observation, that such a fever restores to
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many, a state of the most perfect health. This good effect occurs, provided the increase of circulation and heat be such as the idiosyncrasy of the particular patient can bear. This, which by Hippocrates and others has been termed a salutary fever, our author terms the *Febris Moderata*. On many occasions, however, when the augmentation of heat and of circulation becomes intolerable to the patient, fevers terminate in death. This, again, he styles the *Febris Excedens*. When any one, therefore, visits a sick person subjected to fever, in our author's opinion, the only necessary inquiry is to determine, whether it fall under the head of *Febris Imminuta*, *Moderata*, or *Excedens*. He considers all the other distinctions, such as the divisions into Intermittent, Continued, Pestilential, Epidemic, Endemic, and the like, though producing varieties in appearance, as not altering the species of lesion of the systolic action of the heart.

The increased frequency of the systolic action of the heart, may, he observes, arise from an almost infinite diversity of causes. That all the morbid conditions of the human body
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are fitted for the production of fever, and that no disease can be of long continuance without the induction of fever, we are, he thinks, taught by daily experience. Considering fever as being in every case the consequence of some morbid cause previously existing, it is, he thinks, very generally to be treated rather upon the principle of fulfilling a palliative indication, than of aiming at a curative; that is, the radical removal of the morbid cause.

The fulfilling this palliative indication in general, consists, *1st*, In properly lessening or moderating excedent systolic frequency: *2^d*, In prudently augmenting and increasing the febris imminuta, that it may become a febris vera et completa: *3^d*, In supporting, till the wished for termination, the affectio febrilis moderata.

In treating more minutely of the palliative method of cure, he begins with the consideration of the Febris excedens, which is peculiarly suited to this mode of treatment, as being often successfully combated by the antiphlogistic method of treatment, and in which indeed there occurs a natural tendency to recovery,

covery, from the aversion to all solid food, and the desire of liquids. For moderating the *Febris excedens*, Dr Pinilla is of opinion, that there does not exist any peculiar or specific febrifuge; but that those general practices only are useful, which diminish increased heat and circulation, whether they belong to the tribe of alterants or evacuants.

More skill and prudence is, he tells us, requisite in the treatment of the *Febris imminuta*, for correcting those passive symptoms which have always a fatal tendency. Here the investigation of the primary morbid cause, is of the utmost consequence. For, from this circumstance, aliment, which might be supposed to recruit the strength, often increases weakness; while, on the other hand, evacuants, on some particular occasions, tend even to strengthen a weak body, and therefore, in such circumstances, may not improperly be considered even as cardiacs. In this fever, increased heat, from chemical or mechanical causes, often takes place, with diminished circulation, and a deficiency of the *vis vitæ*. But, with due consideration of the cause, and not neglecting

other modes of cure, this fever is, he thinks, in general to be combated by a timely and proper selection of what are commonly called cardiacs; and among these, he is chiefly disposed to place confidence on what he calls the Cortex de Quarango, probably a name for the Peruvian bark, and on the different preparations of iron.

The treatment of the Febris Moderata, is, according to Dr Pinilla, still more difficult than that of the Imminuta; for here it is often necessary, that the practitioner should be a mere spectator, and that he should in due time give up the use of medicines; and, in his opinion, it frequently requires greater skill to stop when it is proper, than to act on suitable occasions. The palliative cure of the Febris Moderata, may often, Dr Pinilla thinks, be accomplished by the regulation of diet alone; particularly, by paying due regard to the gesta, ingesta, retenta, and excreta. But, on other occasions, such inactivity would be highly culpable. And here it is chiefly necessary, that the physician should be the imitator of nature, endeavouring to preserve the disease in

in the state of the *Febris moderata*; and to prevent its degeneracy, either into the *Febris excedens* on the one hand, or the *Febris moderata* on the other. But this fever, more perhaps than any other modification, requires the radical cure; for, by the continuance of the morbid cause inducing it, or from peculiar idiosyncrasy, there is a great chance of its either becoming irremovable, or inducing other affections very difficult of cure.

That the view here given of the nature and treatment of fevers is simple, will not be denied; but how far it is more consonant to truth than other theories formerly proposed, we will not pretend to say. We must candidly acknowledge, that we have hitherto examined no theory of Fever, which does not appear to us liable to numerous and insurmountable objections. And the most successful method of treatment, is, we believe, more to be determined by proper attention to the *juvantia* and *lædientia*, than by dependence on any theory whatever. This indeed seems to be very much the plan of our present author; and we readily agree with him in opinion, that

the patient often derives as much benefit from a judicious determination when it is proper that nothing should be done, than even from the timely administration of the most powerful and active remedies.

XIV.

XIV.

Observations on the Effects of Camphor applied externally, in some cases of Retention of Urine. By Mr John Latham, F. R. S. Surgeon at Dartford. Vide Medical Communications, Vol. II. 8vo, London.

THE paper before us contains different cases, in which surprising good effects were derived from the external application of Camphor. And, if the same benefit shall be derived from it in similar cases, its introduction, in this manner, may justly be considered as a discovery of great importance in the practice of medicine.

In the first case which Mr Latham relates, the patient was a gentleman upwards of 70 years of age, thin, and of a delicate constitution, but tolerably healthy, temperate in his diet, and used moderate exercise. On the 10th of November, he had been caught in the

rain while on horseback; and, on the following day, had some uneasiness in making water, but not much greater than he had often before experienced; as, for some years before, he had not been able to retain his urine, for any considerable length of time, without inconvenience. On the 14th, a total retention of urine took place, attended with violent and painful efforts to void it, a quick pulse, and some degree of thirst. From that time, it was always necessary to draw off his water by means of a catheter; although, in the mean time, several plans of treatment were adopted. Bleeding, evacuating the bowels with *ol. ricini*, and the use of the *femicupium*, were changed for bark, and the application of cloths dipped in cold water to the pubis. It was soon, however, necessary to return to the first mode of treatment, on account of the increased irritation, and marks of inflammation. Musk, in large doses, was next employed, but without advantage.

Mr Latham, having read of the good effects of the external application of Camphor in stranguries, and having observed, that its application produced a more copious flow of urine

rine than usual, and likewise recollecting, that it is sometimes employed to counteract the irritation of cantharides on the urinary organs, thought that it might possibly be of use in this case. Accordingly, on the second application of a liniment, prepared of oil of almonds, with as much camphor as could be dissolved in it, which was to be used every four hours, the patient voided about half an ounce of urine, and continued to void it, in larger quantities, from time to time, till the 22d.

The use of the catheter (which had been introduced sixty-seven times) was now no longer necessary; and, by proper remedies, and a restorative diet, the patient recovered his usual strength; nor had he afterwards any return of this complaint.

Mr Latham relates another case, the subject of which was a poor woman, of a delicate constitution, who had been seized with a retention of urine, in consequence of exposure to cold. In this case, also, the camphorated liniment succeeded, after the failure of several other remedies. He concludes this pa-

per with observing, that, in two instances of retention of urine, after difficult labours, which continued longer than usual, he had applied camphor externally, with the desired success.

XV.

Observations on the use of Opium in the Venereal Disease. By Mr John Pearson, Surgeon to the Lock Hospital, and to the Public Dispensary. Vide *Medical Communications*, Vol. II. 8vo, London.

AS the alleviation of human misery, Mr Pearson observes, is the grand object of the art of physic, every proposal that tends to facilitate so important a design, is highly worthy of attention. But it is a well known fact, that in our attempts to remove disease, we are often obliged to have recourse to very active remedies, whose salutary properties it would be desirable to obtain in a simple unconnected form. The certain efficacy of such medicines renders them a very valuable acquisition; yet a variety of circumstances concur, to prevent us from always obtaining the whole of their advantages. Among such articles of
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the materia medica, Mercury, in a simple and combined form, has long maintained a high reputation. It has been regarded as the only specific to be depended upon in the cure of lues venerea. Practitioners, however, are aware, that effects, unfriendly to the animal œconomy, sometimes result from its use; and instances do occur, wherein our best efforts are baffled by idiosyncrasy.

Under such circumstances, it becomes an object of great consequence to be acquainted with a remedy, whose efficacy in the cure of syphilis is equally to be depended upon, and the administration of which will never be attended with injury to the constitution. Some accounts, tending to prove that opium possesses these qualities, have been presented to the public, to the end that its merit might be more accurately investigated. In concurrence with so laudable a design, Mr Pearson has given an account of some experiments made with opium, in order to determine its real power in lues venerea.

To ascertain the specific power of opium, in destroying the venereal virus, it is necessary, Mr Pearson observes,

1st, To administer it in cases truly venereal.

2^{dly}, To be sure that no mercury has been previously exhibited.

3^{dly}, The cure ought to be permanent.

4^{thly}, The number of negative instances ought not to exceed those which attend the administration of mercury.

5^{thly}, As the possession of those qualities would only place it on a level with mercury, it becomes necessary, in order to prove its superiority, that less disturbance be produced in the system during the administration of opium, and that the constitution suffer less permanent injury.

In trying this remedy, Mr Pearson has been careful to select such subjects as had not taken any mercury, and always premised bleeding and a purgative, before the administration of opium.

Out of eight cases which the author here relates at length, but which we cannot attempt to abridge, two only were cured by opium alone. In the one case, it was given to the extent of ten grains a day; but, in general, eight grains a day occasioned severe
pain

pain of the head, accompanied with giddiness, sickness at stomach, and slight feverish symptoms.

It is now two years, Mr Pearson observes, since he first began to try the efficacy of opium as an antivenereal remedy. The only cases in which it seemed to succeed with him, are now made public. In every other instance, either of syphilis or gonorrhœa, the event has proved unsuccessful.

The author did not apply a solution of opium to the venereal sores, because the healing of these, by external applications, would have rendered the virtues of the new remedy less conspicuous. When mercury is properly introduced into the system, this kind of ulcer will frequently get well by the most simple applications.

There is a very striking difference in the degree of success which has attended the use of opium. In Medical Communications, Vol. I. the successful cases are said to be three to one. Our author observes, he has not found it advantageous once in ten times; and, in those cases where it was apparently useful, he

he strongly suspects that they were not truly venereal.

The most experienced practitioner cannot always give a decided opinion, whether the patient is or is not tainted with syphilitic virus. When the history and collateral circumstances have rendered it probable, it is usually safe to act upon such a presumption; but, when a new medicine is proposed as a specific in the cure of this dreadful disorder, we are authorized to expect something more than a presumptive evidence of its efficacy. Mercury, properly administered, scarcely fails five times in five hundred of those cases commonly regarded as venereal. The proof of its specific powers, therefore, almost amounts to a certainty. But, if opium fails as often as it succeeds, which, in Mr Pearson's opinion, is saying a great deal more than experience will warrant, it ought to be regarded as a remedy of very doubtful efficacy. Decoctions of Guaiacum, China-root, Sarsaparilla, &c. have been highly celebrated as antivenereal remedies, and their virtues were warranted by men of great reputation. We have now, however, learned to discriminate between their real and
apparent

apparent merits, and never depend solely on their efficacy in the cure of lues venerea.

It has been the custom, for many years, to give opium, either alone or joined with antimony, or decoctions of the woods, to remove some of the troublesome symptoms that often remain after the venereal virus is destroyed. Mr Pearson observes, that he has often used it with advantage during the whole course of mercury; but experience does not permit a reliance on its powers alone, in cases truly venereal.

With regard to the comparative effects of opium and mercury on the constitution, the author thinks it right to observe, that the exhibition of the former was accompanied with as many troublesome attendants as the latter. He also thinks few charges can be seriously produced against mercury, from which, when properly administered, the constitution suffers any permanent injury. That very pernicious consequences daily result from its general and unqualified use, is a fact not to be denied. But this must, he thinks, be almost solely attributed to that encouragement of empiricism which disgraces the metropolis.

In attempting to ascertain the powers of any article of the *materia medica*, it is highly necessary to discriminate its proper and direct effects, from those which are only secondary or accidental. It was long ago observed, that opium sometimes proved purgative; and, from later observations, this appears to arise from an accumulation of this drug in the intestinal canal. The most proper remedy against such a diarrhoea, is the exhibition of cathartics. But these facts are far from invalidating the general opinion, that "opium induces costiveness;" for the diarrhoea is the consequence of accumulated *fæces* in the intestines. That opium diminishes all secretion except perspiration, has been hitherto regarded as an incontrovertible fact. We ought therefore, Mr Pearson observes, to have well attested proofs of its diuretic and salivating powers, before any inferences can be deduced of a practical nature, from a proposition so apparently paradoxical.

Upon the whole, the experience which Mr Pearson has had of the effects of opium, in cases which were indubitable instances of Syphilis, would lead to the belief, that many
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of the alleged cures of venereal affections, by means of this remedy, were founded on deception; and we must also add, that our own observation tends very much to confirm this opinion. At the same time, we have met with several instances, where there were a variety of symptoms, apparently from a venereal cause, in which, either in conjunction with the use of mercury, or after its employment, opium seemed to be productive of the best effect. In these cases, no salivation ever arose from the employment of opium; nor did we ever meet with any instance of salivation occurring from opium, when employed in other diseases to a considerable extent, and for a great length of time. There is therefore, perhaps, too much ground for suspecting, where salivation occurs in Syphilis, when opium alone has been directed, that the patient has been employing mercury without the knowledge of the medical practitioner. And, from deceptions of this nature, we are inclined to think, that no inconsiderable share of the reputation of opium, as an antivenereal remedy, has been derived.

XVI.

On the Medicinal Properties of the Muriated Barytes. By Adair Crawford, M. D. F. R. S. Physician to St Thomas's Hospital. Vide Medical Communications, Vol. II. 8vo, London.

IN a former volume of this work, some account was given of the introduction of muriated Barytes into the practice of medicine, by the insertion of a letter from Dr Crawford to Dr Duncan, on that subject. In the essay now before us, the public are presented, not only with a more full account of this article, but also with a particular detail of all the trials which were made with it, in cases admitted into St Thomas's hospital, prior to the month of June 1789.

From these cases, amounting to seventeen in number, it appears, that it was often used with very great benefit. It indeed appears,

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that

that very little benefit was afforded by it in the last stages of Cancer and Consumption. But, in all the other cases in which it was tried, of which, however, we cannot here propose to give a detail, its exhibition was productive of salutary effects. Indeed, in some instances, it removed diseases which Dr Crawford thinks could not have been subdued by any other remedy. This was particularly the case in scrophulous complaints, in which it seems to have acted with a degree of force and certainty unexampled in the records of medicine.

This article was exhibited under the form of a saturated solution of the salt in water, and was taken from two to ten drops for a dose, twice a day, in a tea-cupful of pure water, or any other convenient vehicle. When it was exhibited in small doses, it appears, in a few instances, to have increased the secretion by the skin; and, in many, it occasioned an unusual flow of urine; but, almost universally, it improved the appetite, and general health. In Dr Crawfords opinion, it combines within itself the qualities of an evacuant, a deobstruent, and a tonic. Like other active medicines,

medicines, however, there can be no doubt, that, if injudiciously administered, it would be capable of producing deleterious effects. In considerable doses, frequently repeated, it would lessen the appetite, by the constant sickness at stomach which it would occasion. And, in a still greater dose, Dr Crawford thinks that it would be productive of much danger, by disordering the nervous system, and by operating violently as an emetic and purgative.

The muriated Barytes which Dr Crawford at first employed, was not in a state of perfect purity. It contained a small quantity of iron, combined with the muriatic acid. It may perhaps be uncertain, whether the virtues of this compound may not exceed those of the pure muriated Barytes. But Dr Crawford has had sufficient reason to be convinced, that the latter substance is a very efficacious medicine. There is, he thinks, reason to conclude, that pure muriated barytes is peculiarly calculated to correct the scrophulous diathesis; but when that diathesis is accompanied with great debility, and with a languid circulation, the efficacy of the salt may, he thinks, be probably

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increased

increased by the addition of the muriated iron.

Dr Crawford farther observes, that most of the minerals from which the Terra ponderosa is extracted, have a greater or less proportion of lead in their composition. Some of them are contaminated with copper ; and Dr Crawford has even many specimens of the aerated barytes, which contain ramifications of mispikel, an ore consisting of iron mineralized by arsenic. The utmost caution, therefore, is necessary, for obtaining the salt perfectly free from any admixture of those substances. And Dr Crawford very properly points out to those who wish to purchase it for medical use, the method of determining its purity.

The solution of this salt in water, should, he observes, be perfectly transparent and colourless ; but, even from want of colour, we are not to infer that it is perfectly pure.

The presence of iron may be determined with certainty by means of the Prussian alkali; for, if the solution contain iron, a small quantity of that alkali, dropt into it, will occasion a blue precipitate. But, if it contain the muriated barytes alone, the precipitate will at
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first have a yellowish cast, which, after it has subsided for some time, will become perfectly white.

Lead may be detected by means of a solution of liver of sulphur; for a small quantity of that solution being dropt into the liquor which we wish to examine, if it contain lead, a brownish precipitate will fall to the bottom, which, after it has stood for a considerable time, will acquire a dark hue.

A very effectual method of detecting metallic salts, and of freeing the solution from all heterogeneous mixtures, is, according to Dr Crawford, the following: Let the heavy spar be decomposed, according to the process recommended by Scheele and Bergman; and let a portion of the earth, thus obtained, be dissolved in pure marine acid. Let a separate portion of the same earth be rendered caustic, by exposing it in a crucible to a red heat; and let distilled water be poured upon it when cold. A small quantity of this barytic lime water, previously filtered, being added to the solution of the earth in the marine acid, if the mixture remain transparent, the solution is pure; but if not, it is contaminated with ear-

thy or metallic salts. In the latter case, let barytic lime water be slowly poured into the solution, till no farther precipitation takes place; and to the filtrated liquor, let as much marine acid be added as may be necessary to saturate the superfluous earth. By this method, Dr Crawford thinks, the solution may be rendered perfectly pure.

Dr Crawford procured some specimens of a mineral which is sold at Strontian in Scotland, under the denomination of Aerated barytes, and was in hopes that the salt might be found with much less difficulty, by immediately dissolving that substance in the muriatic acid. But both Dr Crawford himself, and Mr Cruikshank, an ingenious chemist, who assists in conducting the operations of the chemical laboratory at Woolwich, found, upon accurate examination, that this mineral really possesses different properties from the Terra ponderosa of Scheele and Bergman. He thinks it probable, that the Scotch mineral is a new species of earth, which has not hitherto been sufficiently examined.

Dr Crawford concludes with observing, that, in preparing the medicine which he used, a
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given quantity of water was first completely saturated with the muriated barytes; and to this saturated solution, a little excess of acid was afterwards added. The addition of this acid deprives it of a bitter taste, and renders it more grateful to the stomach; but the quantity of the acid added must be very small; for, otherwise, the strength of the solution will be diminished, by the precipitation of a considerable proportion of the salt. As this medicine, in large doses, would unquestionably prove fatal, Dr Crawford earnestly recommends, that after it begins to excite nausea, vertigo, or any other disagreeable symptom, the quantity should not farther be augmented; and he thinks, that no adult should venture, in his own case, even to increase the dose beyond eighteen or twenty drops, without the advice, at least, of a medical practitioner.

S E C T. II.

Medical Observations.

I.

An Account of the Mineral Waters in the Portuguese Island of St Miguel. By Dr William Gourlay, Physician in Madeira.

N E A R L Y ten leagues north-east from Ponta-Delgada, the principal town in the island of St Miguel, there is a small village, called the Furnace or Caverns, situated in a spacious valley, which is surrounded with high mountains. These are composed of pumice-stone, and are covered with herbage, and a variety of evergreen trees and shrubs. The summits are formed into many ridges, which
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are separated by valleys; and the declivities are intersected by gullies, furnished with small rivulets, which, in their descent, exhibit many beautiful water-falls. The scattered streams unite, and form a river, which winds through the valley. Its banks are shaded with fine poplars.

The soil of this valley consists principally of pulverized pumice. Though poor, it is cultivated, and produces wheat, Indian corn, pulse, and, in the damp situations, yams, and other roots. On digging a little below the surface, many cavities are found: even on walking over the ground, you are sensible of a hollowness.

Towards the south-east end of the valley, there is a small elevation, called the Caldeiras, or Boilers. This elevation, which may be nearly a quarter of a mile square, consists of a number of hillocks, and the action of fire is every where evident. Here we discover a variety of strata; pyrites, lava, pumice, marle, and clay of different colours, ochre, iron ore, and calcareous earth, mixed with alum and sulphur.

There

There are a number of boiling fountains, many warm, and some cold mineral springs. The hot waters form several streams, some of considerable depth. These, in their course, bubble, smoke, and emit sulphureous steams.

In a calm day, the vapour ascends, in curling volumes, to a great height. As you look from the north, the varied green of cultivated fields, interspersed with trees irregularly scattered in the inclosures, a river winding through the valley, a lake at a distance, and clouds of vapour rising from the smoaking fountains, form a delightful prospect, whose beauty is much heightened by the dark verdure, and bold projection, of the mountains in the back ground.

The largest of these boiling fountains, (or caldeira), the caldron, may be 25 to 30 feet in diameter. Not having a proper line plummet, I could not ascertain its exact depth, though this is considerable. The country people, who have never sounded it properly, perhaps indeed never sounded it at all, persuade themselves it has no bottom. The water is scalding hot, and ever in a state of ebullition. It continually emits a vapour, highly sulphureous,

fulphureous, and smelling much like burnt gun-powder. The water deposits a clayey sediment, of a light blue colour. To the taste it shews an ascescent pungency. At the distance of a few yards, behind a ridge of lava, there is another boiling fountain: It is in a cavity, at the bottom of a projecting rock, and is emphatically called the *Forga*, or Forge. Here the surface of the water is seldom visible, being concealed by a very dense sulphureous vapour. The fountain boils with great violence, and a loud blowing interrupted noise. Mixed with vapour and steams, it throws up great quantities of a fine glutinous blue clay, which is scattered to a distance, and incrusts the rock and other neighbouring objects. The noise of these fountains, at a distance, resembles the sound of kettle-drums. These two are the largest; but there are many other boiling fountains; and vapour issues in different places from the crevices in the rocks and banks. In some, where it is scarcely perceptible, on approaching the ear to the fissure, the noise of water boiling may be distinctly heard. From others, the water
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is squirted at intervals, and actually scalds those who happen unwarily to come near them.

In many places, the ground is so hot as not to be stood upon, without inconvenience, and even pain. It is every where covered with crude sulphur: A piece of bright silver, on being exposed to the air, is immediately turned to a gold colour. Though many of the fountains are of a boiling heat, some are of a moderate temperature, and others are quite cold. The water of several is limpid and transparent, while that of others is turbid, and of a whitish or reddish hue, and generally depositing a red or blue clay. Near the fountains, crystals of alum and sulphur are found in vast abundance and variety. Many of these are extremely beautiful; and, where the vapour exudes and issues from the chinks and fissures, some of the crystals are two inches long.

In some places, the ground is of a soft clayey consistence; in others, it is loose, dry, and crumbling. On digging, there issues from the hole a strong sulphureous steam, of such heat, that you cannot keep your hand in it for above a minute. In a short space of time,
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the whole is either filled with hot water, or else covered on the sides or bottom with a coat of sublimed sulphur and alum, resembling hoar-frost. Some hot fountains rise close to the edge of the river which runs through the valley; and, even in the middle of the stream, ebullition is, in some places, perceptible; and from these, steams and vapour rise, as from the hot fountains. The river deposits an ochrey sediment on the stones and pebbles in its bed. In a few places, this sediment is of a greenish colour, resembling martial vitriol. The plants and bushes on the banks are encrusted with sulphur, alum, and other matters. Of the waters, the taste is various: In some, it is that of a strong impregnation of the vitriolic; in some, of the aerial acid; and, in others, it is aluminous, or ferruginous; and several are perfectly insipid.

It is common for the country people to place their culinary utensils over the hot fountains, or upon some of the steaming crevices, and thus save the expence of fuel in preparing their victuals. And instinct has taught the cattle to approach this place, and clear themselves

themselves of vermin, by standing on the hillocks, amid the sulphureous steam.

Near to the hot springs, and skirting a hill of pumice-stone, runs a small stream of cold water, into which several cold springs, which rise in the hill, immediately empty themselves. In their short course, they deposite, some a pale yellow, and some a high-coloured ochrey sediment. Their taste is sharp and ascescent, and their smell ferruginous. The pungency in some, is penetrating and excessive. The water sparkles in a glass like champaigne.

Westward, at nearly a quarter of a mile distant, there are a variety of hot mineral springs, of the same nature, though not so large as those just mentioned. Here some huts, with bathing-places, have been erected, and thither people resort, to use the waters. In the same direction, and about a mile farther up the gulley, are some more hot springs, but of a moderate warmth. They, in all respects, resemble those already described.

The ground, and the plants in their vicinity, are covered with a yellow crust. The bathing huts, which were formerly erected here,

here, were a few years ago totally destroyed by the heavy rains. Nearly a mile still farther westward, runs *Ribeira Sanguinolenta*, or Bloody River, so called from its deep red colour. On its banks, rise a few cold mineral springs, of a strongly ferruginous ascescent taste and smell. The waters deposite a whitish ochrey sediment.

Beyond a range of mountains, and nearly a mile southward, on the borders of a lake, are a number of other hot springs. Here the same variety and difference is observable, as among those already described. Several of them boil violently, with a noise resembling the hum of bees, and throwing up a thick glutinous blue clay, which is ejected, with bubbles and vapours, to a considerable distance. On the surface of many, there is an oily bituminous scum. Here also, as in the vicinity of the other fountains, there are a variety of beautiful crystals, and thick incrustations of alum and sulphur. Among the hot springs in this place, there is one which merits particular attention: It forms a basin or pool, of about twelve feet broad, and twice as long ;
it

it boils with great force, and much noise. Closely adjoining to this hot pool, several cold springs rise, from a bed of pumice: These, though perfectly frigid, are in the same state of ebullition as the hot fountains. They have a very sharp ascendent taste and smell, and are also highly impregnated with the aerial acid. Exclusive of those which I have mentioned, there are a variety of mineral springs in different parts of the island.

I have to regret, that I was here only a few days, and that I was not furnished with a proper apparatus for making that satisfactory analysis which it was much my wish to have made, and which never can be properly performed, excepting upon the spot. The extreme volatility of many of the component parts, and the almost instantaneous change in many of the appearances, must render every examination and process, entered upon at a distance, exceedingly fallacious and inconclusive. However, what few experiments it was in my power to make, I made: they will just serve to shew the parts predominant in the composition of the different waters. The numbers

bers refer to those inscribed on stones, which have lately been erected near the different fountains.

I. COLD.

II. MODERATE.

III. BOILING.

IV. STEAMING.

I. COLD.

a Aerial.*b* Aerial ferruginous.*c* Aerial hepatifed.

II. MODERATE.

a Aerial.*b* Aerial ferruginous.*c* Aerial ferruginous aluminous.*d* Vitriolic selenitic.*e* Hepatifed.

III. BOILING.

a Hepatifed.*b* Hepatifed aluminous.*c* Hepatifed vitriolic.*d* Hepatifed vitriolic argilaceous.*e* Hepatifed argilaceous.*f* Aerial.

IV. STEAMING.

a Hepatifed.*b* Hepatifed argilaceous.*c* Hepatifed aluminous.

EXPERIMENT I.

No. 1. *Two cold springs*.—One transparent, a penetrating acescent taste, and strong ferruginous smell; deposits an ochrey sediment; turned purple by tincture of galls; gives a

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muddy

muddy precipitate with lime-water ; sparkles when shaken, and becomes perfectly insipid.

EXPERIMENT II.

The other spring deposits a bluish sediment ; the taste an acescent pungency, which dissipates to insipidity on agitation ; the tincture of galls does not produce any sensible alteration ; lime-water gives a muddy precipitate.

EXPERIMENT III.

No. 2. *A hot spring.*—The water boils, and emits a strongly penetrating sulphureous and ferruginous smell ; becomes black with tincture of galls ; with lime-water, gives a cloudy precipitate, which falls to the bottom ; with a small portion of infusion of radish, gives a bright red colour.

EXPERIMENT IV.

No. 4. *Another boiling hot spring.*—The water deposits a blue sediment ; taste, slightly pungent and austere ; becomes muddy
with

with lime-water, and effervesces with nitrous acid.

EXPERIMENT V.

No. 8. *A cold spring*.—The water deposites an ochrey sediment; an acescent ferruginous taste and smell; is changed to a dark colour by infusion of galls, and to a sensible red by infusion of radish.

EXPERIMENT VI.

No. 16. *A boiling hot spring*.—It deposites a blue sediment; emits a strong smell of rotten eggs; the taste sharply acescent, but becomes insipid on agitation; precipitates with lime-water.

EXPERIMENT VII.

No. 20. *A spring of moderate heat*.—Deposites an ochrey sediment; the sharp austere taste dissipates on agitation; forms a cloudy precipitate with lime-water; and gives a dark purple with tincture of galls.

EXPERIMENT VIII.

No. 13. *A steaming hot spring.*—Of a milky appearance, and bordered with incrustations of a dark red and green; deposites a white clayey sediment, emits a violent steam, a sharp, austere taste, and strongly hepatic flavour; becomes a light red, with infusion of galls.

EXPERIMENT IX.

No. 30. *A cold spring.*—Deposites an ochrey sediment; the taste and smell strongly ferruginous, accompanied with a pungent acescency. On agitation, it emits bubbles, sparkles, and becomes insipid; precipitates with lime-water; is changed to red by infusion of radish, and to purple, by infusion of galls.

EXPERIMENT X.

No. 31. *A cold spring.*—Deposites a sandy sediment; the taste slightly acescent; sparkles on agitation, and becomes insipid; precipitates with lime-water, and becomes red with infusion of radish.

Notwithstanding

Notwithstanding these waters have, for many years, been resorted to by the inhabitants, for the cure of every species of disorder, as well as for amusement and pleasure, yet the only accommodations for bathing, are a few thatched huts. In these, wooden reservoirs are sunk, two or three feet deep in the ground. They are filled by a wooden spout, and emptied through a plug-hole in the bottom. The warmth is tempered at the option of the bather, by the admission of water from the cold mineral stream. As all ranks of people indulge in a very liberal use of these baths, and many even soak themselves in them several times a day, we might be led to conclude, *a priori*, that such frequent use of warm or tepid water must produce relaxation. This, however, is not the case; on the contrary, they act as a stimulant to the whole system, exhilarating the spirits, and exciting appetite. When the waters, and particularly those of the cold springs, are drank, they prove both laxative and diuretic, and also promote the excretion by the surface.

As the inhabitants were totally ignorant of the virtues of the cold springs, and also of

the use of the vapour-bath, I had an opportunity of making them acquainted with the properties of the former, and likewise of demonstrating the active powers, and beneficial effects of the latter.

C A S E S.

A YOUNG man, aged twenty, had been attacked with a violent rheumatism, which brought on a contraction of the joints in his lower extremities, particularly the flexors of his knees. This was so great, as to bring his leg nearly in contact with his thigh; and his knees were actually touching each other; nor could he separate them more than a couple of inches, and that only at particular times. In this unhappy situation, he had been confined to his bed for nearly five years. On his applying to me, I directed him to try the vapour bath. A chair was made for the purpose: it was so constructed, as to inclose the whole body, leaving the head free at the top, where there was an aperture, which could at pleasure be opened or closed, for the purpose of regulating

regulating the heat. This chair was placed upon the ground, where the sulphureous exhalations issued. He remained seven minutes in it the first time, and was thrown into a profuse perspiration. On using it a second and a third time, he experienced a very sensible relief: he could sit out of bed, stretch his leg to an obtuse angle with the thigh, separate his knees, and even walk on crutches. He continued the bath three weeks; at the end of which, his family concerns called him home; but he went away much recovered, and was convinced of the very great efficacy of the vapour.

A PERSON who was affected with a Hemiplegia of his right side, and had lost the use of his arm, had recourse to the vapour-bath. It soon enabled him to lift his hand to his head, and afforded much relief in other respects.

Besides these instances, which fell immediately within my own knowledge, I have been informed of several other well authenticated cases, which demonstrate the great efficacy of the waters, not only in rheumatic

complaints, but also in the most inveterate cases of scrophula, and other disorders.

A FEW years ago, a Portuguese gentleman, aged about forty, from the island of Madeira, C——— E———, a man of family, and well known to many British residents on that island, was afflicted with a variety of scrophulous ulcers on different parts of his body, particularly about his neck and breast. The attention and skill of the most eminent of the Faculty had been long exerted in vain: the disease not only resisted, but seemed irritated by medicines. He at last took the resolution of coming to St Michael's; and, by using the warm bath, in which he washed his sores, while he at the same time drank the waters, he was perfectly cured in the course of a few months, and returned to Madeira, to the great surprise of his friends, in perfect health, and without any other remains of his former complaints, than the large cicatrices of his ulcers, then completely cured.

A YOUNG gentleman of family, also from Madeira, but whose name I do not mention,
from

from motives of delicacy, laboured under an inveterate cutaneous affection in the head, with running sores in several parts of his body, particularly about the back, was, by bathing in the waters, and also using them internally, completely cured in a few weeks.

AN elderly priest, of a rather full corpulent habit, had, for some years, been affected with the gout in his lower extremities; he was, a few years ago, advised to use the warm bath; his complaint was removed, nor has it since returned.

Upon the whole, I think that there is much reason to believe, that these waters, both internally and externally applied, may be found very efficacious in a variety of diseases. The vapour bath seems to be more powerful, and, in general, much preferable to the hot water bath; the volatile particles are more disengaged, subtle, and active, when exhaled with and forming the vapour, than when they remain combined with and entangled in the water. The degrees of heat are also more easily regulated in the vapour, than in the wet bath.

The

The cold springs contain a powerful chalybeate, with all the virtues which fixed air is possessed of; and, when drank, cannot fail of proving useful tonics in cases of debility.

I consider the morning as the most proper time, both for bathing in the waters, and using them internally. They ought to be drank immediately at the source, before the virtues have evaporated; the dose at first about half a pint, which may be repeated in the evening, and, if necessary, may be gradually increased.

II.

*Descriptio Variolarum Epidemicarum, anno 1786,
Helsingoræ grassantium, per Christ. Jac. Theoph.
de Meza, M. D. &c. cum Andrea Duncan
per Epistolas communicata.*

LICET morbus variolosus tyroni quidem medico fatis notus sit, licet idem, singulis fere annis, imo semper fere, si non epidemice sporadice saltem occurrat; ergo nec inde haurire possit argumentum, pro observationibus rarioribus, quæ a medicinæ cultoribus plurimi fiunt; præterquam, quod ab antiquioribus seculis, hoc pathema accuratissime descripsere, Rhases, Sydenham, Boerhaave, de Haen, Tralles, Tissot aliique, omni laude majores medicinæ principes, inutile tamen mihi haud videtur opus, historiam ejusdem dare eo quo modo apud infantes haud paucos hoc anno observaverim,

Equidem

Equidem maxima laus in antecessores nostros, maximaque utilitas in medicos nostri ævi incidere debet; illorum observata veritate ac certitudine constabilita fuisse, veritas nunquam satis inculcari potest, dum ad hominum doctrinam pertinet, et præcipue in hac de qua hic agitur materia, ad horum felicitatem sublu-
narem; haud parum interesse potest, num præceptores nostri probe gnari aut ignari fuerint artis suæ, numve scripserunt generis humani utilitate, numve tantum honoris et nominis causa, ut inter cæteros lucerent uti Luna inter stellas. Iterumque haud parum interesse debet, num magna exararint volumina, immortalis gloriæ ergo, si observationes ab iisdem pro veris nobis traditas minime concordare cum magna naturæ biblia compertum esset. Etenim necesse est subtilis valde ac exculta horum foret Theoria, ni omni tempore, omni hora ejus falsitas in praxi apparet clinica; quæ autem inde insurgeret utilitas? Nulla equidem quin magna confusio ac rerum perturbatio inde oriretur, dum ille qui horum opera tanti ac quidem ipsi faceret, eosdem pro oraculis, horumque verba pro Evangeliiis haberet, pressoque pede in illorum verba jura-
ret,

ret, nec recedere ab horum doctrina methodoque medendi vellet; raro vel nunquam felix esset in arte Machaonica dum diversa facies esset objecti ab iisdem descripti, illiusque clinico obvii indeque in clarissimo nostro seculo tenebræ aeffent, nullibi damnosiores equidem quam in arte salutari.

Si autem juniorem oportet medicum, annosorem magisque expertum sequi, præsertim quamdiu non licuerit eidem adire artis penetralia, quæ patere debent unicuique sanitatis vitia emendaturo, nostri quoque erit, horum effata prout reperta recta, aut minus recta, concordia aut minus concordia, cum propriis observationibus palam id omnibus facere, ut inde veritas magis confirmetur, et quamvis hæc veritas ab homine quidem minus docto vel experto quam qui primo hoc annotaverint, in lucem proferatur utilis semper erit. Etiam scintillæ lucent.

Experientia quotidiana constat non semper vel ubique varia subjecta in una eademque epidemica uno eodemque modo affici. Notum quoque est hanc differentiam equidem partim ætati, temperamento et corporis constitutioni partimque regimini ac normæ vivendi tribuendum esse. Id autem majori quidem attentione dignum

dignum esse, quod hic morbus (quamvis variæ ejusdem dentur species) in una eademque familia varios infantes varia ac diversa specie infestat, haud hesito affirmare. Nam quid in causa esse poterit, quod proles multiplex ab iisdem parentibus genita, uno eodemque modo educata ejusdemque ætatis fere, in eadem atmosfera degens, eundemque respirans aerem, tam vario diversoque modo afficiatur in eadem epidemia? In diversis familiis vidi quosdam infantes, optimis atque distinctissimis, quosdam iterum, inter cæteros fratres, pessimis ac confluentibus laborasse variolis.

Epidemia circa medium Aprilis caput attollere incipiebat, pergens in Augustum usque; cessare tum iterum videbatur, per tres quatuor hebdomadas, verum circa Octobrem novas acquirebat vires, et pessime in ægrotantes invehatur. Ineunte epidemia morbus ordinario procedebat modo, nisi quod ægritudo acerbius infestaret robustiores pueros, feбри enim laborabant inflammatoria fere. Debiliores vero, molliore carniū textura gaudentes, lassitudine et summa mulstabantur debilitate, aliisque symptomatibus equidem obviis in febre sic dicta putrida,

putrida, nostro ævo forsan non adeo frequenti ac quidem creditum.

Vidua tantum, inter omnes parentes quorum gnati mihi curandi tradebantur, constanter affirmabat ejus filiam sex annos natam, olim jam morbo laborasse varioloso, quod et Van Doevern, alique, nec non noster Abildgaard et de Buchwald cum cæteris observasse perhibent. Verum enimvero cum variolæ quibus modo plectabatur satis magno essent numero, neque lenioribus symptomatibus stipatæ, de hac matris assertione haud sine causa dubitandum puto.

Ut plurimum medici inter se conveniunt de contagio hujus morbi; quodque hoc miasma per attactum præsertim communicetur. Neque ego causam trado de certitudine hujus effati dubitandi; tamen haud affirmare licet eam ubique ac universaliter veram esse. Dum quamplurimi pueri, quamvis inter variolosos versarentur, imo uno jacerent lecto, cum fratribus hoc morbo laborantibus impune quidem. Haud igitur incredibile videtur, quod præter miasma atmosphericum, dispositionem etiam requiri specialem in unoquoque individuo, ad hunc morbum suscipiendum. Aliter enim vix explicare

explicare potest quomodo tot pueri, cum vario-
lofis ludentes immunes maneant a contagio per
unum alterumve annum, tuncque demum mor-
bo plectentur; neque videtur hanc dispositio-
nem in omnibus æqualem esse, sed in uno ma-
jorem in altero minorem vim requiri ad mor-
bum inducendum. Inoculatio rite quamvis et
cum optimo jure frustra tamen instituta, favet
quoque huic opinioni de dispositione necessaria
ad contagium suscipiendum antequam morbus
excitetur.

Prodromi in hac epidemica erant lassitudo
spontanea, sopor, ciborum fastidium, morositas,
horripilationes cum insequente calore, pulsu-
que existente celeri, forti, sæpeque duro, ite-
rumque interdum parvo. Pressiones aderant
circa præcordia, respiratio profunda et suspi-
riosa, oculi lachrymantes, capitis dorisque dolor.
In nullo observavi connatus vomendi, sive a
suscepto contagio, sive a saburra, primas vias
obsidente. Nulli insultibus afficiebantur epi-
lepticis, neque ante eruptionem, neque sub
morbi decursu. Pauci fuere qui sæpius tus-
sitabant, indeque excitabatur dolor in pectore
quem ejulatu ut plurimum indicabant. Con-
tinua in somnum propensio cum rubore faciei;
quæ

quæ aderant in quamplurimis certissima dabant indicia variolas ex confluentium genere erupturas. Delirium et in distinctis et in confluentibus aderat, fortius vero in his quam in illis.

Hic status durabat tres vel quatuor integros dies; hisce autem elapsis, variolæ omnino bonæ notæ erumpebant, recedentibus omnibus fere supra-dictis symptomatibus. Apud illos autem qui confluentibus passi fuere, hic status non ultra binos extendebatur dies. Alii quidem non pauci post quinque vel sex demum dies, parva exanthemata rubra innumerabilia fere comparebant, faciem, thoracem, et brachia occupantia; et ut plurimum angina afficiebantur, majori gradu in confluentibus, minori in discretis. Salivatio qua adultiores confluentibus laborantes ut plurimum plecti solent, nec non dysenteria, mictusque cruentus a medicis in summa sanguinis dissolutione subinde observata in meis non aderant, dum malignitas tanta non erat. Et ægri meæ curæ commissi maxima ex parte non adulti sed parvuli erant.

Circa sextum sæpiusque septimum diem, elevabantur papulæ, si benignioris naturæ, ac

pure replebantur. In malignioribus autem, e contra, partim manebant depressæ et confluentes, partim formabant in medio foveam maculis obscuris vel nigricantibus distinctam, visui equidem haud gratam.

Circa decimum autem diem, parva apostemata, ut Boerhaviano loquar more, incipiebant in benignioribus exsiccari ac formare crustas inter paucos dies dilapsuras, nulla cicatrice aut deformitate in cute relicta. Excipias velim maculas rubras quæ in quamplurimis octo dierum spatio prorsus evanescebant. Iterumque in aliis non nisi post tres integros disparebant menses; quæque majori corporis calore quam maxime in facie ac fronte rubebant.

Alio modo quidem obtinebat in confluentibus passis. Accidente enim suppurationis tempore, oculi omnino claudebantur, quo in statu miseris novem vel decem elabebantur dies. Crustæ tamen spissæ palpebras tegebant, ut vix distingueres orbitarum regionem a reliqua facie. Diu infidebant crustæ deinde fœdas post se relinquebant cicatrices foveasque, quod non tantum Veneris in *Æsopicam* mutabat formam, sed etiam collum et brachia miro de-fœdebat modo; tamen nullum post se relinquebatur

quebatur vitium, cæcitas aut phthisis puta, morbo varioloso superato.

Apud quosdam qui benignioribus laborabant nec satis libera gaudebant alvo, dummodo et naturalem habebant averfionem a medicamentis apostemata et circa nucham et ad crura fiebant, quæ quantocius ad suppurationem ducenda erant, ut materia excedens ea qua natura monstrabat via, evacuaretur; ulcera demum brevi sanabantur.

Tres pueri confluentibus laborantes inter quatuor et septem fere annos nati, magna cum voluptate crustas e facie edebant avulsas. In hisce diarrhœa oriebatur levans, per octo fere dies durans; indeque ciborum appetentia infatiabilis, immo et voracitas, insurgebat. Equidem stimulo a crustis variolosis, in prima calcina excitata, evacuationique alvinæ tribuenda.

Bini pueri, quorum unus quatuor annos, alter sex annos natus, quique ab incunabilis fere fuere pervicaces, morosi ac iracundi, superatis variolis confluentibus, omnino characterem mutarunt innatum, quippe jam morigeri, alacres, docilesque habentur.

Curam quod attinet, quam distinguere placet in prophylacticam et curativam, simplex valde nec infausta fuit. Prophylacticam voco quo omni modo praevenire satagebam symptomatica quædam ante variolarum eruptionem. Huic scopo suadebam pediluvia tepida et quidem in pueris adhuc bene valentibus, caput lavare ac faciem frigida jubebam. Ambulatio, in hortis, aereque aprico quotidiana commendabatur, diæta ex vegetabilibus fructibusque horreis. Placentas farinaceas, terræ poma, piscium, casei, salitæque esum interdicebam. Alvo constipatis lene porrigebam laxans, ne inde debilitarentur nimis. Interdum parum concedebam vini, aquae mixtum, partim ut vires sustinerem, partim ut humorum corruptioni obviam irem, etenim morbum variolosum potius ad putridos quam ad inflammatorios pertinere, si non in omni febris eruptiva, in secundaria saltem nemo inficias ibit. Requirit ergo methodum refrigerantem et dictam antisepticam. Verum enimvero non obstante lotionem frigida faciei ac pediluvii tepidis, non ideo corporis superior pars minore afficiebatur variolarum quantitate. Videtur lotionem frigidam a medicis commendari ad minuendam sanguinis

sanguinis affluxum ad caput. An non inde potius talis affluxus inducendus? Stimulando enim frigus rubore tingit faciem, in quamplurimis hyberno tempore, quibus equidem in aestate pallor sedat in ore.

Ingredientibus supra-dictis symptomatibus ex quibus concludere licebat, variolas mox erupturas, eidem diaeta insistere jubebam: ea tamen differentia ut a vino omnino abstinerent, cui substituebam ptisanam ex pane tosto, decoctum avenaceum cum tamarindis et saccharo. In cibo concedebam poma prunaque cocta, cerasa aceto condita, juscula ex cerasis siccis, et sic porro. Ubi alvus erat adstricta dabam pro aetate unciam dimidiam vel integram aquae laxativae vespere, vel et mane parvum cochleare identidem donec alvus solvebatur. Quibus vero sponte alvus quotidie libera erat, nulla porrigebatur medicina.

Si variolarum eruptio post quartum diem cunctabatur, balneo tepido totum imponere suadebam corpus, indeque cute laxata ex voto succedebat eruptio; ubi major aderat orgasmus optimo cum successu, porrigebam paucas guttulas acidi vitriolici. In potum dabatur serum lactis tamarindatum. Erant qui prae ni-

mia aegritudine ante eruptionem lectum anxie quaerebant, eosdem tamen subinde de die e lecto exire jubebam, meliusque se inde habentes, sponte et nullo suadente, lectum dein relinquebant per plurimas horas. Si pro circumstantiarum ratione licebat, quotidie strigula et calcitra aeri exponebantur libero, aegrotantibus interim in alio lecto decumbentibus; linteamenta et indusiae, saepius si possibile, debita cum cautela mutabantur, suppurationis tempore praesertim, ne pus resorberetur; interdum fenestrae patebant, nocte autem cum aer hic locorum sit perfrigidus, clauderantur.

Debiliores, utique qui simul tacite delirabant, ubique pulsus erat parvus ac variolae specifico ac putrido odore e longinquo percipiebantur, epistasticis indigebant. Aceto lectus et cubacula identidem inspergenda. Cortex cum camphora interne exhibendus. Qui oculorum visu palpebris clausis orbatifuerunt, fovebantur interdum lacte tepido, crustis jam arefcentibus. Eodem modo fovebatur etiam facies, ac brachia, manusque suppurationis tempore, jam lacte jam iterum decocto avenaceo. Oleum quod eidem scopo a quibusdam commendatur

mendatur suspectum mihi erat dum facile corporis calore rancescit.

In quibusdam forfice vel lanceola variolae aperiebantur, ne pus sanguini misceretur, neque profundae remanerent cicatrices. Cum vero reperirem taediosam molestamve esse hanc operationem sive aegris sive medenti neque inde vitari defœdationem cutis cicatricibus, in aliis eandem omisi, qui tamen nitidiorem reportabant cutim a morbo quam priores. Anginosi multum laevabantur a cataplasmatibus emollientibus circa collum. Pauci vero diarrhoeam neque molestam neque debilitantem nimis passi, cum fructu utebantur tinctura Rhei aquosa, ad aliquot guttulas aliquoties de die.

Morbo superato, ad tertiam quartamve vicem debitis intervallis, potio laxans porrigenda erat; hacque methodo laetus recordor, ex quamplurimis variolosis, meae curae commissis nullum periisse, dum tamen hinc inde in urbe aliquot periere Octobris mense praesertim, nullo utentes medico partim, partimve horum consilia negligentes, suoque more pusillos tractantes calore nempe hypocausti, diaeta et regimine morbo haud adaptatis.

Liceat etiam pauca addere de inoculationis successu apud quosdam quorum parentes hanc operationem a me petiere. Prima fuit puella trium annorum, omnimodo uti apparebat sana ac vegeta, sexta inter fratres qui olim feliciter superaverant morbum variolosum spontaneum. Initio epidemicae pus collegeram variolosum, ex infante benignissimas passa. Copia sufficiente accedens ad inoculationis candidatum per duos dies jam huic operationi, per lene laxans praeparatum, methodo Gattiana acum pure madefactam sub epidermidem introduco, eo brachii loco quo fonticulos inurere solemus. Emplastro innocuo tegitur locus. Dietam vix memoratam commendo. Ad tertium diem, amoveo emplastrum ab hocque tempore ad decimum usque diem alternatim modo cathartica modo pediluvia in usum vocabantur. Puella quotidie aeri exponebatur libero, nulloque incommodo afficiebatur neque in brachio ulla comparebat mutatio. Desperabam jam autem de inoculationis successu, atque decimo tertio die morosa fit, de frigore conqueritur, rubor apparebat in facie, cibos fastidiebat, subindeque vomebat. Ad diem decimum sextum prorumpuntur papulae in facie numero haud excedentes

excedentes viginti, plures demum in corpore quae stadia sua accurate percurrunt, puella satis commode habente, quotidie alvus sponte aperta fuit, ideoque bis tantum dein medicamine sollicitabatur laxanti. Quaeri forsitan licebit num hae variolae ad insititias, an ad spontaneas, et contagio excitatas referendae sunt?

Alter inoculandus puer erat sanus robustus crassiori praeditus habito, frater alterius novem annos natæ debilis ac cacochymicae, a parentibus tribus hebdomadibus post praecedentem inoculationi destinatur. Cum vero timerem pro sorore valetudinaria author eram ut non simul commorarent, at quidem frustra, surdo enim narrabam fabulam amboque uno eidem fato subjiciuntur, et exhibitis aliquoties laxantibus ambo inoculandi erant. Filo pure maddido, uti fit, per levem satis incisionem instituitur operatio, emplastroque tegitur vulnuscum. Hic apparatus per binos relinquo dies, quo amoto incisio sanata videbatur. Circa quintum vero diem brachium puellæ rubere incipiebat. Sexto die linea alba circa incisionem videbatur. Vesperam versus margines pallescentes conspiciebantur. Ad octavum

vum diem algebat, cephalalgiam quæritur, dorſique dolorem, naſeat ac vomitur. Ad decimum, febris adoritur, ſudorque erumpit. Ad undecimum, papulæ inſurgunt, alacriter ſe habet. Pluribus pleſtabatur maculis quam præcedens, ſed optimæ notæ. Vulnuſculum puſ fundebat rite; non ultra verum octo dies a morbo ſuperato. Cura claudebatur lenioribus laxantibus.

In fratre autem nulla fiebat mutatio circa vulnuſculum, neque ullæ comparerent variolæ. Inoculatio altera inſtituitur, vix ſed etiam ſine fructu, ſuadenti ut tertia vice inſtitueretur abnuunt parentes. Eritne hic puer omnino immunis in poſterum a variolis? Aderat nulla adhuc diſpoſitio ad contagium ſuſcipiendum? Eratne puſ varioloſum mite nimis ad excitandum morbum in hoc ſubjecto? Experientia et tempus docebit. Pro mea opinione certo certius hunc puerum aliquando variolas paſſurum puto, et quidem depopulanti epidemica maligniori cujus miasma majori vi agebit in puerum. Num recte ſentio aliis dijudicandum relinquo.

III.

Account of the Good Effects derived from the Terra Ponderosa Muriata, in a peculiar Species of Scrophula, occurring among Negroes in the West Indies. By Dr James Clark, of Dominica, Fellow of the Royal College of Physicians of Edinburgh, &c.

WHEN I was about leaving Edinburgh, in May 1789, my worthy friend Dr Black, recommended my making trial of the Terra Ponderosa Muriata, in cancerous or scrophulous cases, if such should occur in my practice. These diseases are seldom to be met with in this climate; but a peculiar species of scrophula has occurred to me among negroes, in which I have administered this medicine with evident good effects. The ulcers are superficial, and always in the course of the lymphatics in both extremities. A string of glandular swellings, of the size of large beans, quite

quite moveable, are first formed, which afterwards inflame and break, and render an ichorous matter, like the real scrophula: but the glands about the throat are never affected; at least such has not occurred to me.

Soon after my arrival, I began the treatment of two such cases, both of which had resisted the use of mercury and decoctions of the woods, repeated at different times, even till a salivation was brought on, for more than a year. Peruvian bark was administered, and all kinds of external dressings were tried, to as little purpose; so that the negroes were abandoned as incurable.

I began with 15 drops of the saturated solution, in a cup of water and sugar, three times a day, given to each of them; but soon increased it to double that quantity, and afterwards still more; and was not a little surprised to find, that they were both cured in about four months time, and have remained so ever since, which is near a year ago.

One had had the disease about four years, and the other six, when the cure was begun. One brought the disease from the coast of Africa, and it broke out upon the other many
years

years after he had left the coast. Neither of them had any venereal appearances, nor was it occasioned by the relicks of the yaws.

I have another case under treatment for the same disease, which has resisted every remedy that could be thought of, for these ten years past. He was the most shocking object I ever saw; covered, almost from head to foot, with superficial ulcers, as above described. Since he began the solution, which is about four months ago, he is evidently getting better. Although he does not take it regularly, and wants the advantage of fresh meat and a nourishing diet, yet I do not despair of his recovery.

Nothing is given with the solution; so that the effects must be attributed to it alone; and no dressings were used, but the powdered bark of the roots of the *Acacia Mimosa*, to dry up the ichorous discharge, and prevent the flies pitching on the parts.

I have also begun this solution in a case of leprosy. But I am sensible it will require a very long trial indeed, to decide whether it will be useful in this disease or not.

Every

Every other medecine has failed in the cure of this most dreadful disease ; for I have tried the Annolie (as the French call them) or small Lizards, in several cases, without the smallest benefit ; so that I must doubt the accounts of so many cures being effected at St Domingo, and elsewhere, by eating of these animals.

It is justifiable to make trial of any remedy, that cannot prove at least injurious, in a hitherto incurable disease ; and I was led to the use of this solution, from the appearances of the spots, knots, and protuberances on the skin, in this disease, which point out the origin of it to be most probably near the extremities of the lymphatics.

IV.

History of a Case of Dropsy, cured by the use of the Infusum Nicotianae. By Dr Thomas Garnet, Physician at Harrogate.

APRIL 8th 1790. H. P. (aged 64) has for many years been in a poor state of health, and subject to nervous and dyspeptic symptoms; which last are frequently attended with great pain in the stomach and bowels. She has frequently been afflicted with the gravel, and has passed several small calculi, though not very lately. About a fortnight ago, she felt her stomach complaints much worse: her appetite became bad; her legs, thighs, arms, and abdomen, began to swell considerably. Her legs pitted on pressure. She has, at present, great difficulty in breathing, especially in an horizontal posture, and starts frequently in her sleep. Her pulse is 86, and weak. For some time past, she has
made

made very little water ; and, at present, not more than half a pint in twenty-four hours.

Sumat. gutt. xxx. infus. Nicotianae (Fowler's) mane et vesp. ex cochl. ii. misturae sequentis :

℞ Aquae menthae piperitid. unc. v. fs.

Spt. lavend. comp. unc. fs.

Confect. aromat. drach. i. M.

April 10th. Took the medicine twice yesterday, and once this morning, as directed. The two first doses produced considerable nausea, with stupor, and giddiness in the head. Has made nearly 3 lb. of water during the last twenty-four hours.

11th. The infusion, this morning, produced considerable nausea. Pulse as usual. Made about 4 lb. of water during the last twenty-four hours. Swelling of the abdomen considerably diminished ; that of the legs not much.

12th. No nausea from the medicine. Has made more than 5 lb. of water during the last twenty-four hours.

13th. Much nausea, both last night and this morning. Quantity of water nearly as yesterday.

yesterday. Swelling of the abdomen and arms diminished; that of the legs much the same.

14th. Little nausea. Has made rather more water than yesterday.

15th. No nausea from the medicine. Made near six pints of water during the last twenty-four hours. Ordered to bandage her legs with a flannel roller. Legs not so much swelled as yesterday.

17th. Made nearly the same quantity of water, on each of the two last days, as on the 15th. Swelling of the legs nearly gone.

19th. Makes about the same quantity of water, or rather more. Swelling of the legs, abdomen, and arms, quite gone. The medicines were omitted; but, as she complained still of great weakness, and want of appetite, she was ordered to take the following medicine:

R Tinct. amar.

Vin. chalybeat. aa. unc. iii. M.

Sumat cochl. bis in die.

From the use of this medicine, she grew gradually better; and has since enjoyed a pretty good state of health.

V.

History of a Case of Syphilis, cured by a very simple Mercurial Preparation. By Dr Thomas Collingwood, Physician, Sunderland.

NO disease, of ancient or modern date, has excited such a number of writers to exhibit their abilities, or disseminate their nostrums abroad in the world, as the Lues Venerea. Astruc has bestowed a great part of his useful work on the authors, and their practice, in that disease. He has also offered, at large, his sentiments on the seat, causes, and method of cure. Since the time of Astruc, Swediaur, Simmons, Hunter, and many others of less note, have written on this disease; and, although their theories are very different, yet mercury has been recommended as the grand specific in every stage, and has been applied in all the different forms that fancy

fancy could suggest, with various success. The following case, I flatter myself, will throw new light on the theory; or, at least, from attentive consideration, illustrate that part of the system primarily affected. And I hope, also, that the method of cure, from its simplicity, will merit a future trial.

Mr T. F. an eminent practitioner, a sober, steady man, about thirty-six years old, delivered a woman, who, he afterwards learned, laboured under the venereal disease. The child died three weeks after, exulcerated over the whole body. My friend had a scratch between the fore-finger and thumb of the right hand, when employed, which continued livid and inflamed for four weeks. Being of a timorous disposition, and having a rooted aversion to the above disease, he communicated his suspicions to me, which I endeavoured, but in vain, to treat with ridicule. Five days after I was sent for, the axillary glands of that side felt uneasy and enlarged. A soreness of the pectoral muscles, and oppression of the breast, were also felt. He complained of an uneasiness about Poupart's ligament,

and a tightness in both groins. As medical men are the worst patients to deal with, when ailing, I advised a slight dose of physic, and would have bled him, had not his pulse been weak and small. In a few days, a knotty hardness was felt down the inside of the right thigh, accompanied with pain, stiffness, and inability to walk, when first rising from bed. This knotty tightness sunk beneath the musculus vastus internus, at its insertion on the lower condyles of the os femoris, and came out again in the region of the femi-membranosus of the tibia, distributing itself on the inside of the leg, to the foot. In the whole length, hard painful knots might be felt, about the size of peas. Sometimes he could walk as easily as if not afflicted; again, almost instantaneously, he was taken with violent spasms, pain, and inability to walk.

These affections continued for ten days; when, being fatigued with a long journey, and having to sit in a house, with a stone floor, all night, with a woman in labour, he was attacked with pains in his stomach and bowels, which terminated in a colliquative diarrhoea, and great debility. This complaint
continued

continued obstinate, notwithstanding the most powerful medicines were persisted in for a fortnight, until he was unable to arise from bed without help. Every copious alvine discharge was attended with faintness and lassitude. During this period, a laborious respiration, and the soreness of the muscular parts of the breast, and glands of the axilla, continued. The muscles of the lower extremities became very flacid; and the knottiness and tension of the thigh and leg in some measure subsided. Excepting hectic symptoms, which kept off, there were few that were flattering.

I consulted with my late worthy friend, Dr Aitken of Edinburgh, who recommended astringents. Before I was honoured with his answer, the diarrhoea was subdued by large doses of opium, decoctions of elm-bark, elixir of vitriol, and the Peruvian bark. A flannel waistcoat, and milk diet, were recommended by another physician.

My friend still insisting that his case was venereal, and as he had, since delivering the above woman, been employed by a man labouring under a confirmed pox, of many

years standing, which man was said to hold criminal conversation with her, I began to give some ear to his tale. Indeed, a multitude of circumstances transpired in favour of the allegation; and, as he began to gather strength, from the cessation of the diarrhœa, and the glandular spasmodic affections, we had recourse to mercury.

I should have observed, that, immediately on the diarrhœa supervening, an eruption of a pale red, or iron coloured spots, was distributed over his whole body, but more particularly on his breast, where the spots were larger, and of a shining red. This efflorescence gradually disappeared in the course of twenty days.

With the above, it will be necessary to mention another symptom, not commonly observed in this disease, which followed the looseness; viz. a violent pain about the os petrosum, tinnitus aurium, deafness, and a continual gnawing, and excruciating sensation at the insertion of the splenii capitis, into the os occipitis. The pain, deafness, and tinnitus aurium, were the last complaints that left him.

As

As my friend was of a very irritable habit, and obliged to attend business at all hours, we thought the mildest mercurial the most proper. And, as I had sufficient proofs of the efficacy of the pulv. hydrarg. sacch. viz. crude mercury, rubbed down with double the quantity of white sugar-candy, ten grains of this powder were taken twice a day. He continued this for a fortnight, with considerable remissions of pain, tension, &c. It was continued a month longer in the same way; then once a day; and once every other day, for another month. Two years have elapsed, and he has had no return of the disorder*.

From what has been advanced in this case, Boerhaave's ingenious, but absurd theory, of the seat of the disease being in the cellular

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and

* I am convinced, from repeated trials on all the different preparations of mercury now in vogue, however tortured by fire, or combined with other bodies, that the mildest mercurial, taken immediately into the absorbent system, will perform permanent cures, and with less hurt to the patient's constitution, than any other article; and, during the cure, a person may follow his ordinary employment without danger.

and adipose membrane, must fall to the ground †. His method of cure, by melting down the adipose fat by salivation, &c. is, in my opinion, equally ridiculous; as my patients, under a course of mercury prepared in the manner mentioned above, grow fatter, stronger, and have their constitutions renovated, while at the same time the disease is completely eradicated.

† *Vide* Boerhaave's Essay on the Venereal Disease.

VI.

Observations on the Use of Elm Bark, in several obstinate Diseases. By Dr Thomas Collingwood, Physician, Sunderland.

THE inner bark of the elm tree, (*Vid.* Dr Lysons in the Medical Transactions, vol. II. p. 203), I have tried in a number of cutaneous diseases, with success. It has performed many real and permanent cures, and gave relief in some obstinate, and otherwise incurable disorders.

At first setting out, I confined its use to cutaneous diseases, strictly so called; but its effects were so flattering, that I soon extended it to various other affections. In scalds, burns, erysipelatous affections, and other excoriations of the skin, in decoction and ointment, mixed with hog's lard, and a small quantity of bees wax added, it was productive of great benefit.

The

The glutinous lubricating nature of this decoction and ointment, must have produced these effects, from excluding the external air, which is more than half the cure in all wounds and excoriations of the skin. The tenacious lubricating nature of the decoction, suggested its use in diarrhœas, dysenteries, and all abrasions of the bowels, where the mucous membrane was robbed of its covering. I gave it in the above complaints, and it succeeded beyond my most sanguine hopes.

In the wasting looseness of children, whether from a disposition to scrophula, from teething, or whatever unknown cause, I always found it of service. A little toasted rhubarb was added to the decoction in some cases; in others, small doses of opium, and sometimes spirits of hartshorn, or other alkaline and absorbent medicines.

In child-bed, women, who, during pregnancy, are often subject to obstinate constipation of the bowels, and, where a debilitating diarrhœa supervenes, on the third or fourth day after delivery, it is of infinite service, although the patient seem so much exhausted, that she cannot, in all human probability,
survive

survive a few hours. The first dose gives relief, a repetition retards the alvine discharge, and acts as a cordial and sedative to the languishing debilitated patient.

During twelve years extensive business at home and abroad, I have had a great number of opportunities of trying the efficacy of this bark; and, as I have always been partial to simples, cannot help giving it due praise.

I could give a number of cases, to corroborate my observations on its particular efficacy, but have selected a few, not from any thing peculiar in those related, but as a specimen of the whole.

CASE I. Mary Tale, aged 21, of a thin slender make, and apparently predisposed to phthisis, was, on the third day after delivery, attacked with diarrhœa. She had a loose stool almost every half hour, attended with fainting. After having passed upwards of twenty loose stools, and being very languid, I was called, and immediately ordered two table spoonfuls of the decoction after every loose stool. The quantity and quality of the discharge altered after the first dose; and after

ter it was continued for six hours longer, the looseness abated. The saline mixture was given, with equal parts of the decoction, for a few days, and the patient was soon reinstated in her former health.

CASE 2. T. Kirfop, a boy, aged seven, but remarkably tall and thin for his age, was taken with obstinate diarrhoea, which reduced him to a mere skeleton. A number of anthelmintic febrifuge medicines, plasters, clysters, &c. were administered, without producing any salutary effects. A table spoonful of the decoction was ordered, after every loose stool; the stools lessened in number and quantity, and in five days totally ceased, no constipation ensuing. Not the least appearance of worms was perceived during the cure.

CASE 3. A. R. aged 68, had long been afflicted with flatulency, from sedentary employments. A wasting diarrhoea, accompanied with lientery, came on. Many medicines were ordered by his apothecary, which used to succeed in obstinate cases, but here they were given without effect. On being called,

I ordered the decoction. It was persisted in for a few days, and succeeded; but although the diarrhœa often returned, especially after being much afflicted with flatulence, the decoction never failed to check the discharge, and bring him to a regular stool.

CASE 4. Mr S. Story, a wealthy farmer, aged 69, had a scaly eruption over the whole body from his infancy, sometimes rougher and smother by turns; but from extraordinary exercise in a long journey, in wet damp weather, with frequent change of beds, the eruption almost totally disappeared. This disappearance was succeeded by pain in the stomach, cardialgia, and a vomiting of bilious and acrid matter, with muscular spasms over the whole body, loss of appetite and emaciation, succeeded by diarrhœa. A blister on the pit of the stomach being premised, the decoction was given after every loose stool, with mustard whey for common drink. An eruption, in three days, appeared on the breast, and in two days more, over the whole body, and he gradually recovered. The decoction was desired to be repeatedly used. Ten
years

years have now elapsed, and he continues to enjoy perfect health.

I could mention a number of other cases, but it would only be a repetition of similar facts.

Dr Lyson's receipt for its preparation, is that which I used often, though there were seasons and situations when it could not be got green. The dried bark did not make such a glutinous decoction, yet it was equally efficacious, and in some cases preferable. The green bark always answered best in the ointment, from its tenacious gluten being easily separated from the fibrous part, the aqueous part exhaling in the preparation.

In practice, now, I seldom use the green bark internally, as generally, every spring and autumn, I lay in my half year's stock.

From its real efficacy, mildness, and the ease of procuring it, I have now classed it among my vegetable simples, next in order to the Cortex Peruvianus; and can say, from experience, that in cases similar to those related, it is as much a specific as the Peruvian bark in intermittents; and, were it more in use, especially in hot climates, where diarrhœas, dysenteries,

senteries, and fluxes from diseased livers, and other acrimonious causes, are so prevalent, I am inclined to believe it would supersede many pompous and expensive medicines.

Indeed, I have often recommended to my medical friends the use of it; but few have thought proper to give it a fair trial. Mr Hopper, a very diligent young man, and lately an apprentice of mine, has tried it for three seasons, in the cold climate of Greenland; and, I am authorised by him to say, that it succeeded in a number of cases.

VII.

Account of the Abstraction of an uncommon Quantity of Water from the Bladder, by the Use of the Catheter. By Dr John Wilson, Physician at Spalding.

MR HOWARD, a gentleman about 40 years of age, and of an active disposition, sent for me about the end of the year 1785. He had been seized with the usual symptoms of ischuria, as he imagined, from drinking old ale. He felt considerable weight and oppression, accompanied with pain, in the region of the pubes; the desire to make water was frequent, but ineffectual. He was at times sick, and troubled with borborigmy; his mind was much agitated and alarmed for the issue of his complaint. The belly was costive, his pulse rather fuller than in a state of health. He complained of thirst; he had frequently passed sand with his urine, and had
been

been before affected with the disease, from drinking stale beer. From considering the case, I had little doubt of its being owing to spasm; and the use of the remedies which I employed, favoured the supposition. Bleeding, fomentations, glysters, the warm bath, mucilaginous drinks, and, to remove increased irritability of the system, small doses of laudanum, were frequently given. By diligently pursuing this plan, he made a considerable quantity of water, and passed it with ease. The abdomen, however, still continued swelled, particularly on the right side; and he complained of its being sore when touched. As there still appeared to be a considerable quantity of water in the bladder, it was thought prudent to introduce the catheter, which gave him immediate ease. He continued to pass water well for several days, and I gave over my attendance. A neighbouring apothecary visited him daily; and I was desired to see him again, from his having had a return of his complaint. He had then laboured under his disease several days, and I found the abdomen very much distended. The same plan had been pursued, but not with the

same advantage. The pain and forenefs was become general, and a degree of ftupor had come on. The extremities were cold and clammy, the pulse feeble and quick. No time was to be loft. The catheter was attempted to be introduced; but the refiftance at the neck of the bladder was fo great, that we were obliged to defift. My friend Dr St Clare was called in confultation; he propofed the catheter; and, after many efforts, and giving the patient a good deal of pain, he fucceeded. To our aftonifhment, no lefs than fixteen pounds and two ounces of bloody water were drawn off. The patient was immediately relieved from his pain; but the ftupor increafed, and, after lingering for twenty-four hours, he died. My reading does not furnifh me with an inftance of fo large a quantity of water being collected in the bladder, nor perhaps would it readily be believed, *a priori*, that it was capable of fo great a diftention. The cafe, I think, affords this ufeul leffon, never to trust too long to remedies, but to advife an early introduction of the catheter.

VIII.

A curious Case of a Lusus Naturæ. By Dr Knox, of the Island of Tortola. Communicated to Dr Duncan by Dr Matthias Gabagan of Grenada.

EARLY in the morning of the 20th of July 1789, I received notice, (along with some other gentlemen of the Faculty), informing me, that a negro woman had just before been delivered of an infant, of a very extraordinary and uncommon appearance, and requesting that I would attend and examine it. On view, it appeared to be a monstrous production; and as, at that time, the public curiosity was much excited, and the accounts which have been since circulated, of its figure and appearances, are in general erroneous, it may not be improper to inform the public, of the actual state of this Lusus Naturæ, as it

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appeared

appeared on an external view, and on dissection.

The external view exhibited an appearance, which, to one unacquainted with productions of this nature, was truly extraordinary. It had two heads, perfectly well formed, covered with very black hair, in greater quantity than is usual with infants at the time of birth. The features of the two faces were regular; they had an exact resemblance of each other; and, had it not been, that the singular circumstance of a double head conveyed a horrid idea, the two faces might have been considered as pleasing ones. Behind the two heads, the first object which presented itself, was a double arm, formed by what may be considered as a junction of the left arm of one foetus, with the right of the other. They were firmly united from the articulation at the shoulder to the elbow, but had each a distinct humeral bone, both of which were articulated to a concavity of the scapulæ, united so as to form an appearance of one shoulder. These arms, (or this double arm), were extended and erect, so as to appear over the heads; and from the elbow to the extremities

tremities of the fingers, they were separate, distinct, and well formed. Two arms appeared, which were perfect in every respect. The breast was very broad, and a little indented in the middle; from thence downwards little difference was to be perceived in the figure of the parts, from those of a well-formed new-born infant. The lower extremities were single, and perfect in appearance; and there was a single funis.

The appearances on dissection were not less extraordinary, than those exhibited on an external view. On removing the integuments, one sternum only was discovered, and which had no other uncommon appearance, than that it was much broader than usual, was indented in the middle, and wanted the xiphoid cartilage. It was articulated on each side by the intervention of the cartilages to the ribs, which were perfect in number, and sent off from two spines. These spines were separate and distinct from their origin at the neck, to their extremities, and did not terminate in any thing like an os sacrum or coccygis, both of which were entirely wanting.

The sternum being removed, on the first view of the contents of the thorax, there seemed to be only the viscera of an individual; but, on opening the pericardium, which was single, it was found to contain two hearts, one of them of a proper form and size, having its auricles, ventricles, and vessels, in a perfect state; the other smaller and imperfect; its arterial vessels were small and contracted, and the left auricle and pulmonary vein were wanting. It was at first conceived, that the lungs consisted only of one pair, as each lobe had the pulmonary artery from a distinct heart; but, upon a further examination, two other lobes were discovered, situated under the first; they were small, compressed, and in a very imperfect state, and appeared to want the proper vessels.

On opening the cavity of the abdomen, the first object which presented itself, was a liver of a very uncommon size and shape, stretching from side to side, so as to fill both the hypochondria. It appeared to be double, possessing two gall bladders, and two sets of biliary vessels. Under the liver, were found two
distinct

distinct stomachs, situated in a concavity of the liver, on each side. From each stomach proceeded a distinct duodenum, into each of which the ductus communis on each side opened itself, in the usual manner. The intestines were double and distinct, and united by a separate mesentery to each spine. They continued in this state throughout the duodenum, jejunum, and more than two thirds of the ilium; they then united. In their progress an inch or two further, they seemed only simply to adhere, and then, suddenly inosculating, they became one gut, and continued in that state till the rectum terminated in the anus. There were two spleens, one situated under each stomach; the omentum was small and shrivelled, and it could not be discovered if it was originally double. The kidneys were double; one pair were perfect; each had its ureter, which opened, in the usual manner, into the bladder; the other pair were small, compressed, and imperfect, the ureters being wanting. The bladder was single, and in every respect perfect. The pelvis in which the bladder, &c. were placed,

was formed by an union of the two spines at the last two vertebræ, and the ossa innominata. The pubis was small, and not perfectly formed; and the os sacrum and coccygis, as has been already observed, were wanting. On a further examination, it was discovered, that each trachea was affixed to a distinct lobe of the lungs, and each œsophagus opened in a distinct stomach. This creature had the genital parts of an individual female.

The throng of people whom curiosity had brought to view this production, rendered a more minute inspection impracticable; but the appearances already described, were the principal which were observed, or which it is necessary to mention. To enter into a general consideration of the subject of monsters, and the controversies which have agitated the learned with respect to their origin, would, on the present occasion, be superfluous, nor could it convey any new information to professional men, for whom this history is principally intended. It will therefore suffice to observe, that cases of this nature are by no means new, or very uncommon.

Many

Many are related in the Philosophical transactions, and memoirs of the learned Societies in Europe; and the subject has been accurately investigated by many medical and anatomical writers, and particularly by the learned Morgagni, in his excellent work *de Sedibus et Causis Morborum*.

IX.

IX.

Histories of different Cases of Amputation, &c.
By Mr William Rait, Surgeon in Dundee.

THE following history, I think, marks, in a pretty decided manner, the propriety of amputation in similar cases.

William Spink, aged seventeen, of a scrophulous habit, at the age of about eight, fell from a high stair. He began gradually, after that, to lose the ability of his leg; the knee swelled, and the tendons in the ham soon became very much contracted. In short, the lad, in a few years, became a downright cripple. He consulted me; and, from the first inspection, I gave it as my opinion, that he had very little chance of surviving any length of time; but that I conceived, if he had any, it depended solely upon immediate amputation. The lad, his mother, and friends, seemed almost instantly

instantly convinced of the propriety and necessity of the operation, and readily agreed to it.

Several surgeons, also, to whom I imparted my sentiments, coincided with me in opinion. One medical gentleman, indeed, of much experience, and for whom I have the highest respect, hesitated, upon the very rational principle, that it was evidently a scrophulous case, of long standing; and that, although the seeming evil might be done away, yet the cause might probably be so riveted, as to continue to exist in the habit, and consequently prevent a radical cure. But I opposed to that mode of reasoning, *1st*, That the patient was evidently and daily losing strength and substance: *2^{dly}*, That, from the time of life, a change might be about to take place in the system, which the taking off such a cause of great and constant irritation, might tend to forward, and to favour: And, *3^{dly}*, That the lad himself was so fully convinced of the propriety and necessity of it, from his own feelings, and the misery of his state, and so much determined to submit to the operation on the day I had appointed, that I was fully persuaded

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ed the disappointment would have proved to him a very dangerous one, and a much more severe shock than the operation. I therefore, on the 19th of January 1791, amputated above the knee, after the manner recommended by the very accurate Mr Bell, whose mode I prefer to Mr Allanson's, for the reasons very fairly stated by Mr Bell himself, in his System of Surgery; which reasons I hold to be highly satisfactory, and, at least to myself, perfectly convincing.

The knee, on dissection, amply verified my first predictions. The cartilages forming the cavity of the joint were exfoliated, dissolved in the pus, or probably corroded by it; at any rate, they were obliterated, and the naked bones were rough and black. The matter contained, of which there was a very large quantity, had much the appearance and consistence of curds in whey newly broken, without being pressed.

Indeed, it is astonishing, from such a collection of matter, and under such circumstances, that the boy had not, long before, fallen a victim to an undermining hectic.

However,

However, I do believe that period was fast approaching, or at least was very certain. I took up the femoral trunk, and a large diverging branch, with the tenaculum: two other smaller arteries (in the upper and inner part of the thigh) were so contiguous, that I was obliged to encircle them with a needle. Little or no suppuration had taken place on the seventh day from the operation, the first of inspection; neither did the parts look by any means to my liking. But I plied him with bark, porter, generous diet, a glass of wine, &c.; and, on the 26th January, or second dressing, the former appearance was all done away, and, in its stead, an uniform red surface of healthy granulations had taken place; only the parts remained lax and flabby, which I, in some measure, remedied, by a retaining adhesive plaster and bandage.

As a proof of the superiority of the tenaculum, I found the ligature of the large branch on the second dressing, and that of the femoral trunk, on the third; that with the needle never separated, but was cut out.

The boy recovered flesh and strength daily, and is now in perfect health.

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One circumstance, however, I cannot omit mentioning: Owing, I imagine, to the flabbiness of the muscles, hanging downwards and backward from the bone, and from a small portion being bared by the knife or the saw, two small exfoliations took place, the one the 3d April, and the other about a week after. My chief reason for troubling you with this case, is, that it wears on the face of it, the motto, "Nil desperandum," when we consider, that the patient laboured for nine years under a most distressing lameness, whether from the effects of a fall, or the scrophulous habit, or both combined, with a constant emaciating discharge, from not less than twelve sores, two of which, in the knee, evidently emitted a sanies from its cavity. I would also wish to hold forth this doctrine (the result of a good deal of practical experience) to young practitioners, that amputation, in cases of scrophulous white-swelling, as it is called, or under whatever other name it may be known, and also in ulcers of long standing, and which have induced great debility, even hectic, our prognosis may be much more favourable than

than in general it may in the athletic and healthy, where amputation is necessary, from accidental causes.

The following is a remarkable instance of recovery, which I beg leave to communicate :

His Majesty's ship, Southampton, being alongside the wharf at Port-Royal, Jamaica, for the purpose of careening, in November 1777, William Thorn, a young lad, servant to Lieutenant Hill, after the fatiguing heat of a very sultry day, took the recreation of bathing, and swimming about the ship. Upon his returning to the boat, (where his clothes lay), then lying considerably within the ship's stern, with its fore part on the ground, and stern in pretty deep water, he was followed by a large and most audacious shark.

Although many people on the wharf witnessed the horrid scene, and shouted, to deter the monster, he persevered in the pursuit, and, just as the lad had got hold of the boat's stern, the shark made the half turn, and got a leg nearly buried within his voracious jaws. However, from the tugging and resistance, although the leg, downward from the calf, was
lacerated

lacerated in a most shocking manner, the complete loss of the foot, from immediately above the malleoli, which, as it were, had arrested his jaws, was only effected. Mr Weeks, surgeon's first mate of the Southampton, and myself, were together in one of the lofts of the King's yard. Upon hearing the lad's cries, we immediately ran to his assistance. No tourniquet being at hand, we took a handkerchief, knotted it in the middle pretty thick, which we applied as a compress to the femoral artery in the ham. The ends we secured above, and twisted with a stick, for a screw-key. By these means, we effectually stopped the hæmorrhage, which was very considerable, and carried him to the Naval Hospital. Amputation of the leg took place that evening. The lad did well; and, in May 1779, I had the pleasure to see him at Plymouth in perfect health.

I shall only at present trouble you with another case.—Mr Dobbins, a midshipman of his Majesty's ship Pallas, in an action on the 29th February 1780, with the *Princesa del Asturias*, received a wound from a half-pound swivel

swivel ball, which entered at the upper edge of the left scapula, slanted along upon it, and glided over its anterior edge, into the axilla. It was extracted next day ; and, although it had grazed along a considerable extent of the scapula, and occasioned several small, but tedious exfoliations, yet I believe the case terminated well ; for I saw him, many months after, at Port Royal, Jamaica, where he had been sent to sick quarters, in good health, though still obliged to wear a scarf ; which, considering the size of the ball, and its rugged surface, being of cast metal, as well as the thinness of the bone injured, I think rather a singular instance.

X.

*Account of a Rupture of the Abdominal Integuments, occasioned by a fall, and followed by gangrene of the Omentum, terminating favourably. By Mr Alexander Kellie, Student of Medicine in Edinburgh *.*

ON the 27th of June last, about 10 o'clock, P. M. in my father's absence, I visited Alexander Hall, aged 14, who had fallen from a ship's mast, in the harbour of Leith, to the deck. The accident happened about 9, P. M. He sat on the quay for some time after he fell, being unable to walk home, till a boy, a com-

* Lest the reader should imagine, that this extraordinary case rests entirely on the report of a young man, it may not be improper to observe, that it is attested to be true, in every particular, by Mr Kellie, senior, Surgeon in Leith; of whose accuracy, as well as integrity, there can be no doubt.

a companion of his, chancing to pass by, carried him home on his back. He complained much of pain in his belly; with a view to alleviate which, his mother gave him some spirits; but no relief being procured from that remedy, she began to take off his clothes, to put him to bed, when she was alarmed by the strange appearance of something protruding from a wound in the lower part of his belly. A message was immediately sent to my father, and the boy was put to bed. Having examined the parts, I found that, about an inch above the left groin, three portions of the intestines had been forced through an aperture similar to that formed by a sharp cutting instrument; but, as no cut nor laceration in his clothes could be observed, it appeared it had been burst by the pressure of the fall. I returned home, where I found my father, who went immediately along with me to see the boy; and having laid him in a horizontal posture, with his thighs drawn towards his belly, he began, with all necessary caution, to attempt their reduction, which was effected with some difficulty.

The wound was about two inches in length, across the under part of the abdomen. It was stitched in three places by the interrupted suture; and light, easy, emollient dressings were applied. An emollient glyster was given him immediately after the operation, which he felt warm at the fore. He then got an anodyne draught, and was ordered to be kept very quiet. During the reduction, the intestines felt very cold; but no discolouration nor injury could be observed on them.

We now left our patient, with directions to suffer him to stir as little as possible. When I visited him in the morning, I found, notwithstanding the opiate which he took, he had a restless night, and vomited frequently. The draught was repeated in the morning; and, as no stool was obtained by the injection, he got a solution of purging salts, with tinct. sen. comp. a small quantity of which was ordered to be taken every half hour; but this, with the preceding, was soon vomited; nothing would remain on his stomach. His pulse now felt much stronger than natural, and beat very quick. He was bled to the extent of ten ounces; and a saline mixture was ordered

dered him, a dose of which he took every hour.

The blood was not fizy. His chief complaint was now referred to the epigastric region: emollient fomentations were ordered to be applied over the whole abdomen; and a purging glyster was given him.

29th. The fever began to abate; his pulse was not so strong; the vomiting, however, still continued severe. The fomentations and glyster were repeated, which procured him a stool. In the evening, he got a dose of pacific pills, with calomel. 30th, The sore was dressed, and looked well; he still complained of much pain in the region of the stomach, which now appeared to be much tumified; but little pain was felt on pressure being applied. He vomited his pills a short time after he had taken them.

July 1st. He was restless and uneasy; vomiting somewhat abated. The sore was dressed; the lips appeared swelled, and the stitches threatened to give way. Adhesive straps were applied at this dressing; and he was ordered to move as little as possible. Glysters, fomentations, and the pills, were repeated.

2d July, He did not vomit for some time after taking the pills ; no natural stool could as yet be procured ; the stitches of the sore had now given way, and the edges retracted considerably, notwithstanding the application of the adhesive plasters, which were now omitted. He continued much the same till the *7th*, when visible signs of gangrene appeared. His pulse sunk, general debility and languor took place. Some way above, and contiguous to the sore, the parts put on a brownish appearance ; and, about three inches above the wound, a pretty large bluish vesicle, surrounded by one or two small ones, made its appearance ; from which, upon being punctured, a purple-coloured fluid was discharged. He was immediately put upon a course of Peruvian bark, elixir of vitriol, and port wine ; a dose of which, he was ordered to take every hour. Bark glysters were also given him thrice a day. The bark, &c. sat easy on his stomach. The mortification soon stopped ; every alarming symptom wore gradually away ; and the parts looked favourable. On that part where the large vesicle was opened, an ulcer soon formed ; which, though

though every precaution was taken to prevent its increase, soon penetrated through the peritonæum, and exposed the bowels open to our view. A portion of the omentum, in a mortified state, soon occupied the aperture, which was removed without the smallest pain to the patient. He now got regular and free passage in his belly, and every appearance of danger wore off. The bark and other medicines were continued till he was able to get out. A cicatrix of all the parts being perfectly formed, and a considerable prominence appearing at the seat of the injury, a truss was adapted to it; and he can now attend to his work, as a shoemaker, without any inconvenience whatever.

XI.

History of a Case of Inguinal Hernia, successfully cured by Operation, after appearances had become very unfavourable. By Mr William Robertson, Surgeon in Kelso.

ISABEL PATON, a woman of a slender make of body, aged thirty-four, had been subject to an Inguinal Hernia for the space of seventeen years; during which period, it had given her very little pain or uneasiness. But, being engaged in hard work, upon Thursday the 14th of July, the hernia became, all of a sudden, greatly enlarged. She was, at the same time, instantly seized with an excruciating pain of the bowels, attended with an almost incessant retching and vomiting. These complaints continued through the whole of that evening, and all the following day, with little variation, excepting for the worse. Every means for her relief, that could be
thought

thought of, was tried in vain; and all attempts for the reduction of the hernia, proved fruitless. Upon the Saturday, her complaints were still aggravated. The retching and vomiting were accompanied with a loss of strength. Hiccough, and the other alarming symptoms which usually preface an approaching dissolution, had taken place. The gentlemen of the medical faculty here, were unanimously of opinion, that the operation was the only remaining expedient which had a chance of rescuing her from inevitable death.

The operation was agreed to by the patient. The skin and cellular substance being divided, and the sac laid open, it was found to contain both omentum and intestines, with a portion of a sanious watery fluid. The omentum was rather of a brownish colour, and full of indurated knotty substances. It appeared to have been the original rupture. The intestines were of a blackish livid hue, and had all the appearance of an incipient mortification. Before the intestines could be reduced, it was necessary to enlarge the aperture of the ring. The omentum adhered so firmly to the ring, that the complete reduction

tion of it was found to be impossible. Part of it was cut off, and a portion of it was left unreduced. Notwithstanding this, the wound readily cicatrised over; the alarming symptoms gradually left her; and she was able, within the space of seven weeks, to walk about, and follow her usual employment, and has continued free of complaints ever since. This history, therefore, clearly demonstrates, that the operation will sometimes be successful, though performed at a later period than is proper, and after appearances have become very unfavourable.

XII.

A Case of Inverted Uterus. By A. Hamilton, M. D. F. R. S. Ed. Professor of Midwifery in the University, and Fellow of the Royal College of Physicians of Edinburgh.

OF the accidents which occur in consequence of parturition, none is perhaps more liable to happen under the management of ignorant practitioners, than inversion of the uterus.

Fortunately, however, in the greatest number of such cases, the inversion is only partial; a circumstance, to which probably may be attributed the many histories of favourable termination of inverted uterus, which have lately been recorded by medical writers.

The following case differs from every other which I have had access to know.

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The publication of it may therefore prove useful.

In the year 1777, a midwife (who died several years ago) attended the labour of a lady, who before had been the mother of several children.

The labour was as favourable as could be wished, and, after a few hours, a living child was born. At that time, however, the midwife received a pressing message from another patient, which induced her to extract the placenta as expeditiously as she possibly could.

The violence with which this was accomplished, gave the patient very great torture, succeeded by pains resembling the throes of labour, attended with much straining, bearing down, and suppression of urine, along with a considerable degree of hæmorrhagy.

These symptoms continued for nearly thirty-six hours, during which time the midwife was absent. From the report of the attendants on her return, she assured the patient, that she had another child to bear, which, she added, easily accounted for what she had suffered.

Having passed her hand within the vagina, she felt a round hard substance. This confirmed

firmed her opinion ; and therefore, she pronounced the bulky body to be the head of a dead child, which, she said, she would be able to remove, without occasioning much pain.

For this purpose, she grasped the round substance with her hand, and began to pull it down with the greatest force ; and this she continued to do, till she was obliged to desist, from her own strength having failed ; for she did not regard the dreadful cries of the patient, nor the threatening symptoms of convulsions.

The attendants then insisted on my being sent for. On my arrival, I found a large fleshy mass, protruded from the pudendum, and extending very nearly to the knees ; this I immediately knew was the uterus in an inverted state. The midwife, however, having asserted, that no such accident had happened, I called for a taper, and, drawing back the bed-clothes, shewed her the effects of her inhuman rashness. From this circumstance, having an opportunity of examining the case very accurately, I discovered, that the uterus,
and

and along with it the vagina, were completely inverted.

The state of the unfortunate patient was highly alarming : her pulse was scarcely perceptible, and she had clammy sweats, attended with fainting. In short, from every symptom, there was great reason to apprehend immediate death.

I resolved, however, to attempt to reduce the inversion ; but I found it impracticable ; for the os uteri had contracted very much, and was so rigid, that it rendered the return of so large a body as the uterus then was, absolutely impossible.

As every attempt to reduce the inversion had failed, and increased the disposition to faintings, and threatening convulsions, I was obliged to content myself with replacing the vagina, and pushing up the uterus within it. This, I confess, I did more for the sake of decency, than from any hope of saving the patient, whose case I considered as desperate.

Soon after this had been accomplished, her pulse having become stronger, I gave her 35 drops of tinct. thebaic. and took my leave for that night.

On

On my return next morning, I learned, that she had slept quietly for six hours after taking the opiate; but, since that time, she had suffered violent pain, from the inverted uterus being again protruded through the os externum, in consequence of having turned on her knees, from an urgent desire to make water.

The reduction of the inversion was again found impracticable; and therefore, being encouraged by the temporary relief which had ensued from replacing the uterus within the vagina, I determined to confine my views to that practice alone. I hoped, by doing so, at least to obviate the violent pain, the suppression of urine, and the tenesmus, which were occasioned by the protrusion of the uterine tumour.

I therefore reduced the uterus within the vagina, and retained it there by means of a ring pessary, mounted with sponge.

By this treatment, to my great satisfaction, the bearing down pain gradually abated, and the patient made water freely soon after.

During several days, there was a fetid purulent discharge from the vagina, and therefore,

fore topical injections were frequently employed, and the bark was given internally.

About fourteen or fifteen days after the uterus had been retained within the parts, the vagina assumed a gangrenous appearance, which rendered it necessary to withdraw the pessary, notwithstanding which the uterus kept its situation.

From this period, the patient gradually recovered, although, for several months, she was very much debilitated, and subject to fluor albus, and moderate uterine hæmorrhagy, from time to time.

In six months, she began to recover her appetite and strength, and was able to take more exercise than could have been expected; for I met her one day when she had walked above a mile and a half, without much inconvenience, except being greatly fatigued.

At the end of twelve months she was quite well, able to take the charge of her family as usual, and became regular in the menstrual evacuation, though the uterus continues completely inverted.

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The principal medicines which she took during her convalescence, were, the Peruvian bark and vitriolic acid. She had recourse also to the country air, and used the cold bath.

It is now fourteen years since the accident happened, yet the patient lives, and enjoys a tolerably good state of health.

To this case I am induced to add a few observations on *Inversio Uteri*, for which the importance of the subject is a sufficient apology.

The uterus, at the full term of gestation, when emptied of the liquor amnii, and child, is a large bag, supported only at the cervix by the ligaments which fix it to the sides of the pelvis, and connected with the vagina below. Part of the bladder is attached to the fore part of its cervix, and the rectum is slightly fixed to the back of the same part.

In this situation, the uterus, in natural cases, after the patient has recovered from the shock of delivery, begins to contract on all sides, by which means the placenta is separated and expelled. If, however, the practitioner does not wait for this contraction, but pulls

by the umbilical cord, as the cake is generally attached to some part of the fundus, seldom at the cervix, the uterus will be inverted.

Some authors have endeavoured to prove, that the womb, if suddenly emptied of its contents, may be inverted by the bearing down of the patient, pushing the fundus through the open os uteri; but the reasons hitherto offered, to support the probability of such an occurrence, seem to me to be very unsatisfactory, and are by no means convincing.

In cases of very large pelvis, when the labour pains are strong and forcing, if the convolutions of the cord round the child be considerable, the uterus may, in some degree, be inverted. This is, however, an accident which can be attended with no disagreeable consequences, under the management of a judicious practitioner.

There are two kinds of inversion of the uterus. These differ materially from each other, in symptoms and event. Hence, though they are only degrees of the same disease, they require different treatment, and may be
termed

termed the Partial, and the Complete Inversion.

The former of these is distinguished from the latter, by its appearance on examination, and by the symptoms which supervene.

The uterus, when partially inverted, does not hang without the pudendum, but is felt within the vagina, as a round firm substance, resembling the head of a child. It was this circumstance which deceived the midwife, in the case I have described. In this disease, therefore, the fundus uteri alone is protruded through the os tinæ, which may readily happen from its unsupported state, if the cord be violently pulled, before the womb contracts.

When, however, the uterus is completely inverted, the tumour extends from the pudendum to the knees; and the vagina, being also protruded, is turned out like the finger of a glove. This circumstance cannot happen without laceration of the ligaments, &c. which connect the uterus to the sides of the pelvis. The bladder must also be unavoidably drawn out of its situation.

The Complete inversion of the uterus cannot therefore be induced, except by very violent and forcible efforts; consequently, the practitioner who is guilty of occasioning such an accident, must be destitute of every principle of humanity, as the pain attending so dreadful an operation must be almost insupportable.

The dangers to be dreaded from the Partial inversion of the uterus, are profuse uterine hæmorrhagy, and inflammation of the womb, with its consequences. The suppression of urine, and tenesmus, which supervene for some days, are only temporary symptoms, which disappear in proportion as the bulk of the womb decreases.

In such cases, the hæmorrhagy often proves fatal; for the orifices of the large blood-vessels, with which the placenta was connected, pour out a vast quantity of blood in a very short time.

This, however, is not always followed by death; for the orifices, being exposed, in some degree, to the action of the air, have their diameters contracted, or plugged up by coagula, while the os tincæ, by pressing the fundus

dus uteri violently, prevents the blood from flowing into the large arterial trunks.

From this view, therefore, it is certainly often in the power of the practitioner to prevent the fatal termination of this disease, even though the uterus cannot be replaced in its natural state. If, however, the reduction cannot be accomplished, the patient is generally exposed to uterine hæmorrhagy during the remainder of her life, whenever she is fatigued, or makes any considerable exertion.

In every case, therefore, of Partial Inversion of the uterus, the complete reduction ought to be attempted. Dr White's method, for this purpose, will often succeed, when every other fails, and should therefore be always adopted.

If the reduction of the uterus cannot be effected, which can very rarely be done where proper assistance has not been procured soon after the accident, the practitioner, for the reasons already stated, should not despond, but ought to employ every means in the power of our art, to stop or moderate uterine hæmorrhagy.

The Complete inversion of the uterus is followed by consequences much more dangerous than those which occur in the Partial one.

The patient feels the most excruciating pain; deliquia and convulsions succeed, which induce almost immediate death. In five or six cases, where this horrible accident had happened, although I was in the patient's house within from a quarter to three quarters of an hour after the inversion, they had all expired before my arrival.

From authors having universally mentioned profuse uterine hæmorrhagy as the consequence of the complete inversion of the womb, I was led particularly to attend to that circumstance; and, in no such case did I ever observe more than a trifling discharge; so that the fatal event is to be imputed solely to the deliquia and convulsions. These must unavoidably ensue from the violent injury done by the laceration of the ligaments, &c.

It is probable, that, in complete inversion, no uterine hæmorrhagy can take place; for the ligaments through which the large blood-vessels

vessels pass to the uterus, must be lacerated, or very much stretched; in either of which cases, the passage of the blood will be stopped.

The branches of the hypogastric, which enter the uterus at its cervix, serve, in such cases, to nourish it, and hence prevent mortification of that organ, in the event of the patient surviving, as in the case which I have related.

There is much reason to believe, that it is impossible to reduce the completely inverted uterus, except immediately after the accident has happened, before the os uteri has begun to contract; at least, I have tried to do so in vain. Dr White's method I have always followed, but without success; and, as the disease terminates fatally so suddenly, no time ought to be lost in making fruitless attempts. Those practitioners who have imagined that they had replaced the inverted uterus, when the accident had happened many hours before, have mistaken the case; for, under such circumstances, the uterus can only have been partially inverted.

Some doubts have occurred to me with re-

spect to the propriety of reducing the completely inverted uterus to its natural situation, even though it were practicable: these I cannot, on this occasion, explain fully. In order, however, to suggest an inquiry into the subject, I shall just mention, that they are founded on the state in which the uterus would be, were it perfectly replaced.

In every case of complete inversion, I do not hesitate to advise, that too much time should not be exhausted in attempting the reduction; and that, if convulsions threaten, the uterus should be replaced in its inverted state, within the vagina, and retained there.

The case which I have described, exhibits an example, both of the partial and complete inversion of the uterus; no instance of which, I believe, has been recorded: It affords an example of recovery, under circumstances which, in the greatest number of similar well authenticated cases, have proved fatal to the patient.

My ingenious and much respected friend, Dr Denman, has, in his valuable collection of engravings, obliged the world with the representation

sentation of an inversion of the uterus, where the patient recovered for several months. This may perhaps be considered by some, as similar to that which occurred to me. There are, however, circumstances in the history of Dr Denman's patient, which induce me to suspect, that the inversion was, in her case, only partial.

For the accident was not discovered, in that case, till twenty-four hours after it had occurred; which could never have happened, had the uterus been pulled down completely through the os tinæ. The woman also had uterine hæmorrhagy, which does not, I have endeavoured to prove, take place in complete inversion; and, as the most certain confirmation of my suspicions, the ligaments, as represented in Dr Denman's elegant plate, though "altered in their direction," are nearly in their ordinary situation, with respect to their connection with the sides of the pelvis.

I will conclude these observations, by remarking, that, from what I have seen in my
own

own practice, and from the histories I have received of cases, in that of others, I am led to believe, that by far the greater number of those who recover from Inversio Uteri, have had the uterus only partially inverted.

XIII.

History of a Case of obstinate Constipation, successfully treated by the Use of Quicksilver.
By Mr William Perry, Assistant-Surgeon to
the 3d Regiment of Foot.

SAMUEL SHORT, a private in the 3d regiment of Foot, having lived a long time in tropical climates, and indulged to excess, as is too frequently the case with soldiers, in the use of spirituous and intoxicating liquors, had contracted such visceral obstructions, as to render him very subject, on the slightest irregularity, or exposure to damp, to spasmodic affections of the intestines, ending sometimes in a most violent constipation, accompanied with a high degree of inflammation in the bowels.

In Jamaica, this man had one or two violent attacks; but, from every information I have
been

been able to obtain, they were by no means so obstinate as the one I am about to relate,

Though quicksilver is a remedy little used by modern practitioners, in constipation of the bowels, and censured even by some of the most eminent of the Faculty, yet its singular utility in this instance will, I hope, sufficiently recommend the case to the attention of medical practitioners. It is not, however, the disease, or its remedies, which deserve attention, in so high a degree, as the consequences with which it was attended. The circumstance, of a man being restored to life, after lying in a state apparently dead for the space of more than ten minutes, is both singular and interesting. It may, I hope, serve as an useful caution to prevent us from giving up patients for lost, without trying every means to restore them, even after appearances of death, in some cases, have taken place. Indeed, I trust it is now generally believed, that the actions of life may, for a much longer period than occurred in the present case, be completely suspended, though the power or principle is not extinguished, and that, so long

long as the latter exists, there is a possibility of restoring the former.

After these observations, I shall now proceed to relate the history of the case to which I have alluded.

On the 11th of January 1791, in the morning, this patient was attacked with the usual symptoms of constipation, accompanied with those indicating inflammation of the bowels. The pain, which was very acute, was situated immediately beneath the great lobe of the liver, in the course of the colon. These symptoms were accompanied with a vomiting of yellow bilious matter. His pulse was about an hundred in the minute, much contracted, and small; his skin was warm and dry; and he had not had any stool for three days. I immediately let blood to the extent of sixteen ounces; his abdomen was fomented with flannels wrung from warm water; and a pound and a half of tepid water, joined with a little oil, was thrown up the rectum. He was ordered also to employ the warm bath at bed-time.

Jan.

Jan. 12. h. 9na, A. M. He had derived much relief from the remedies used yesterday. The blood drawn shewed a great quantity of buff on its surface. His pains were considerably relieved; but though his injection was repeated at bed-time, both were rendered, without the smallest particle of fæces. Upon pressing externally along the course of the colon, a hardness was perceptible, and he experienced a slight degree of pain. The watery injection was now ordered to be repeated, to the extent of two pounds and a half, with the addition of a quantity of assa foetida. A draught was also given him, composed of castor oil and tincture of senna; but that being immediately returned, he was ordered to take a bolus, composed of scammony, jallap, and a little cream of tartar; and it was directed to be repeated every third hour, till a stool should be procured.

Ditto, h. 7ma, P. M. The injection given in the morning was rendered without any fæces. Four of the boluses were retained without producing any effect. The pain of his bowels recurred about half an hour ago, as violent as ever, and still continues.
He

He has had no stool since the 8th, in the morning ; he takes no nourishment ; his pulse is now about an hundred, small and contracted. His skin is very dry and warm ; his countenance shrunk, and rather pale.

In this situation, I blooded him immediately, to the extent of ten ounces. He bore it tolerably, and found his pains rather more easy. The effervescing draught was continued, and the fetid injection repeated to two pounds and an half. A large blister was applied over the part affected ; and fifteen grains of cathartic extract, with one grain of opium, were ordered to be taken every four hours. The warm bath was also used, previous to the application of the blister.

Jan. 13. h. 9na, A. M. He slept none during the night ; but the fever and pain of his bowels are almost gone. The blister operated well ; but though he had three doses of the cathartic extract, no stool was procured either by them or the injection. The latter was returned soon after exhibition. No buff appeared on the blood drawn yesterday. The vomiting recurred once or twice in the night. Fomentations were diligently used, and he
had

had continued in the warm bath for twenty minutes. Five days had now elapsed since he had any stool, and he was exceedingly reduced, scarce being able to take or retain the smallest nourishment. His pulse was very soft and low, not exceeding eighty strokes in a minute.

The effervescent mixture was ordered to be repeated, and thirty grains of cathartic extract, with one of opium, were ordered every third hour. An ounce of tobacco cut small, was then infused in four pounds of boiling water; to the strained liquor a little oil was added, and the whole was thrown up into the rectum. The warm bath was ordered to be repeated at bed time.

Jan. 14. b. 9na, A. M. He slept very little. The injection of infusion of tobacco produced no effect. He found the warm bath very comfortable. He had no pain of the bowels, but the swelling and hardness of the colon continued undiminished, and he had now been without a stool for six days. His pulse was seventy-six in the minute, and very feeble, but regular. He had much dejection and yellowness of countenance, and he was extremely weak.

Every

Every thing now put on the appearance of the utmost danger. Matters having arrived at the most critical extreme, every remedy that even carried with it the possibility of success, was looked upon as worthy of trial. I therefore ordered two ounces of quicksilver in a little mulled wine, to be taken every third hour, till a stool should be procured. The effervescing mixture, with fifteen drops of laudanum to a dose, was ordered to be continued.

Do. h. 9na, P. M. He retained the quicksilver; and about five minutes after the third dose, he had an evacuation per anum. It consisted of an infinite number of small round lumps or balls. Between three o'clock and nine, he had three of these stools, and a considerable quantity of the mercury appeared in them quite comminuted, and reduced to the smallest particles. The patient, however, was so extremely weak, that I thought no hopes of recovery could be reasonably entertained. He was ordered some mulled wine and sago; and the quicksilver and neutral mixture were directed to be continued through the night.

Jan. 15. He had many evacuations during the night, all in little round lumps, ex-

tremely hard, but accompanied with very little foetor. The hardness and swelling of the right hypochondrium, were now almost gone; but the debility seemed rather increased, notwithstanding every precaution was used to guard against it. No pain of the bowels now remained, even on very hard pressure.

He was directed to take a large proportion of wine, chicken broth, &c. The quicksilver and effervescing mixture, with fifteen drops of the laudanum to each dose of the latter, were continued as usual. The warm bath, on account of his debility, could not be repeated. Though the original complaint of his bowels seemed to be completely overcome, most probably by the specific gravity of the quicksilver, yet he had now every appearance of approaching dissolution. From the consideration of his present state, and of the inflammatory symptoms which prevailed at the commencement of his disease, there was every reason to suspect a mortification in his bowels. But his stools were never attended with any stronger smell, than might have been expected from so long a retention. I ordered him a decoction of
Peruvian

Peruvian bark, and snake-root tea, to be taken through the day.

Jan. 16. h. 8va, A. M. I was informed by the serjeant of the hospital, that Short was dead. The intelligence by no means surpris-
ed me. On my arrival at the hospital, I found him to every appearance dead; and, as far as could be ascertained, he had now lain in this state for five minutes. It is, at all times, a most disagreeable circumstance for a medical practitioner to be called in, when his patient is either dead or dying. But, in this case, surrounded by a number of soldiers, generally very credulous, and some of whom were in the last stage of a bad fever, the scene was peculiarly distressing. Nothing now remained for me to do, but to comfort the living, by shewing what I rather deemed a superfluous attention to the dead. I accordingly warmed a pint of port wine, and added to it thirty grains of Cayenne pepper; and, by means of a long glass tube, poured the whole into his stomach. I then applied warm bricks to his feet, and held volatile alkali to his nostrils. He had now lain for seven minutes and a half in a state of suspended animation.

After the administration of the wine, I stood by him for two minutes more; but finding no symptoms of returning life, I left him, after having shut his mouth and eye-lids; and went into an adjoining ward to visit some other patients. I had only remained there about two minutes, when I was told by the serjeant, that Short had made a sort of noise, and had begun to open his eyes. I was much astonished at the relation; but on running into the ward, I found his eyes perfectly open, and possessing a degree of wildness not to be described. Some pulsation was perceptible in both carotids. There was also some appearance of respiration, and a visible contraction in the pupils of both eyes. But the progress of respiration was very slow, and seemingly attended with much difficulty and distress.

I immediately ordered two of the strongest soldiers who were at hand, to strip, and to lay down, one on each side of my patient. I poured some warm wine by means of the glass tube, as before, into his stomach; and, in the course of an hour, I had the pleasure of finding him in a fair way of recovery. By the time he recovered his articulation, which was
in

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in about two hours, he called incessantly for victuals; and his appetite so increased, in the course of a few days, as to become even voracious. The rapidity with which he recovered his strength, was astonishing. He is now perfectly well, and doing his duty as a private soldier.

Portsmouth, Feb. 1. 1791.

XIV.

History of an Obstinate Swelling of the Knee, terminating in Recovery. By Dr George Macfarquhar Lawson, of Montego Bay, Jamaica.

A MAN, aged 23, of a healthy and robust constitution, plethoric habit, and dark complexion, had, for a week or two, complained of a disagreeable sensation in the joint of the right knee, about its centre. The knee became rapidly and considerably swelled, and the leg gradually wasted. His appetite and health declined. He knew no cause whatever to which his complaint could be attributed.

A practitioner advised him to keep a cloth wet with vegeto-mineral water, constantly applied to his knee, and to throw cold water upon it every morning and evening. Finding no relief, he applied to me on the first of February. I immediately concluded it to be a
rheumatic

rheumatic white swelling. Pain had now taken place. It felt as if deep-seated, and was very severe, extending along the tendinous expansions of the muscles connected with the joint. It was much increased by motion, particularly by flexion or extension. The skin had a shining appearance. A blister was applied on each side of the patella, leaving the top unblistered, with a view to scarification; which, however, he declined. A few cooling and laxative medicines were given, as he was costive; and one of the following powders every morning and evening:

℞ Antimonii crudi drachmam unam.

Opii purissimi gr. vi. M. & divid. in dof. vi. Mercurial friction of the thigh of the same side, was carried so far as to affect the mouth; and he took daily six drams of powdered Sarsaparilla. On the 27th of February, the antimonial powders were omitted; and next day, I had a consultation with Dr Murray, an eminent physician here. We directed for him the following pills. ℞ Extracti foliorum Cicutæ, Calomelanos, utriusque grana xiv. Extracti Thebaici gr. vii. Mucil. Gum. Arab. q. s. fiat massa divida in pil. xiv.

quarum duæ mane et vespere fumendæ. Mercurial friction was laid aside: he had for common drink, a decoction of guaiacum. The blisters were kept open, and the sarsaparilla continued. A seton was also introduced below the knee.

The extract of cicuta was gradually increased till the 13th of April, when he became affected with headach, stupor, and other symptoms often arising from cicuta. This article was therefore omitted; but calomel and opium were continued till the 29th of April, when his knee was much reduced in size, being hardly larger than the sound one, and without pain.

The blister, which had hitherto been kept open, was now healed up; the pills were laid aside, and no medicines were taken, but two drams of the sarsaparilla daily, and a small quantity of the guaiacum decoction. The seton was kept open, and affusions of cold water to the knee, were used every morning and evening. Gentle friction with camphorated oil, was also frequently repeated, and continued for half an hour each
time.

time. On the 6th of May, he began to take five grains of the *fal Martis* daily; but, on the 14th of June, he left off all medicines, being then restored to the perfect use and strength of his knee. He now goes about his usual business, which is a laborious one, without the least impediment.

S E C T.

S E C T. III.

M E D I C A L N E W S.

IN former volumes, we have repeatedly given some account of the progress made in building the New College at Edinburgh; a subject in which we consider medical education, in general, as not a little interested. We are happy at being now able to inform our readers, that several of the Professors are already accommodated with class-rooms, in the north-west corner of the great square.

The following address, by Dr Duncan, to the students of the Institutions of Medicine, when he began the lectures on that branch, October 26th 1791, will convey some information,

mation, which may not be unacceptable, to many of our readers.

“ Gentlemen, I cannot enter on the business of a lecturer, in this room, without first sincerely congratulating you, on our being now assembled under the roof of a new College. On the reputation which this university has acquired as a school of medicine, by the meritorious exertions of the eminent Professors who first taught that science at this place, it is unnecessary for me to enlarge. Their numerous pupils, instructed in the healing art, have extended its fame to every corner of the British Empire, to every part of the world.

Without such abilities as they possessed, it would have been impossible to combat and overcome the difficulties with which they had to struggle; and, among others, those which arose from the fabric of the College itself, were no inconsiderable bar to their exertions. For the buildings appropriated to science in this place, were not only mean and contemptible in their external appearance, but highly inconvenient in their internal structure. By
these

these means, the industrious student was here deprived of some advantages, at least, which he had an opportunity of enjoying at other seminaries of medical education. It had long, therefore, been the earnest wish, both of the Patrons of the University, and of the public at large, that a commodious College should be built, to second the exertions of those Professors, whose abilities had rendered Edinburgh the great school of medicine for the British dominions, and had attracted foreigners from almost every nation in Europe.

But the money allotted for supporting the fabric of the College of Edinburgh, was by no means adequate to such an undertaking. Its whole public funds, were annually expended, in supporting a tottering edifice. Before, therefore, any serious thoughts could be entertained, of beginning a new building, other aid became necessary. Under the auspices, however, of a * chief Magistrate, equally distinguished for indefatigable exertion, and for many amiable virtues, the generosity of the public has been effectually called forth to
second

* Thomas Elder, Esq; of Forneth.

second the efforts of Science; and we have now seen a serious and substantial commencement to the building of a new College at this place. For in the part already finished, accommodation will be afforded not only for us, but for six other Professors and their pupils, even during the present Winter Session.

It is indeed true, that the apartments ultimately to be appropriated to all these different teachers, are by no means completed; and the students of the Institutions of Medicine, have now a temporary accommodation only, in this room, by favour of the Professor of Anatomy. The respectable body of Trustees, to whom the conduct of the building is entrusted by the contributors, have very properly directed their attention, in the first place, to that part of it, which is to afford every possible accommodation to the students of Anatomy. And the room which we now occupy, is one of those intended to be appropriated to the purposes of anatomical painting. The period, I trust, is not far distant, when in this apartment, the industrious student, on whom nature has bestowed, not only the zeal of an anatomist, but the genius of a painter, will at
once

once employ his talents, in improving himself, in aiding his Professor, and in advancing our knowledge of the structure of the human frame. For if the important work, thus happily begun, be not allowed to languish for want of proper aid, the apartment intended for the Institutions of Medicine, will be completed before the commencement of another Session.

To accomplish this, indeed, farther aid from the public will still be necessary. But I trust, that the example of those, whose liberality has given such a beginning to this undertaking, will yet be followed by many others. Indeed, there is already, perhaps, not more ground for admiring the generosity of some, than for wondering at the delay of others. When we consider that many have already contributed to this undertaking, connected with Edinburgh by no other tie, but that of being the friends of Literature, and encouragers of Science, we can hardly suppose, that any respectable pupil of the University, will withhold his mite on the present occasion. And it is difficult to conceive, that there is any son of our Alma Mater, now placed in easy and independent

independent circumstances, who will not secretly reproach himself with negligence and ingratitude, if he shall longer delay giving his assistance to this undertaking; for, by this delay, he may allow a work to be stopped in its progress, which he ought to consider himself as called upon to encourage and support.

Even a small contribution, from every independent medical practitioner educated at Edinburgh, who has not yet given any aid to the new College, would form a very considerable sum. And as every part of the building, intended for the accommodation of the Medical Faculty, is already somewhat advanced, there is good reason to believe, that such aid would be sufficient to complete the whole of it. It is therefore to be hoped, that the circumstances which have delayed the contributions of many, will no longer operate; and that the Trustees will be enabled to continue the work, with the same expedition which has hitherto been employed.

The progress which has already been made, and which, I flatter myself, will still continue to be made in this undertaking, by the voluntary contributions of a free and enlightened people, must reflect, in the eyes of posterity,

ty, no inconsiderable honour on the present age. It is not, indeed, intended, that this new College, either in point of magnificence or extent, should equal many of those fabrics, reared in former times, by the exactions of arbitrary power, or the enthusiasm of blind superstition; but, in point of elegance and utility, it will be inferior to none of them: And it will, I trust, be a lasting monument, both of the judgment, and taste, of the present period.

But, Gentlemen, if the friends of Science, have already done so much for our mutual accommodation, both as lecturers and as hearers, let us but for a moment consider, what return they have a right to expect from us, in the character either of Professors or of pupils. Nature, indeed, has not endowed every one, raised to a Professorial chair, with those peculiar talents, which adorned the founders and supporters of the medical school at this place; and it is not even every age, which can produce many men, uniting the profound knowledge, the pleasing elocution, and the extensively varied abilities of a *Monro*, a *Whyte*, or a *Cullen*. But you will never, I am confident;

fidest, expect from any teacher, what he is incapable of accomplishing. What we are able to do, will not, I trust, be wanting; and I flatter myself, that the Professors of the present period, will be inferior to none of their predecessors, in unwearied exertions of active industry. You, Gentlemen, will, I trust, bear witness to the public, that it is our constant endeavour, to convey useful instruction to our hearers, to the utmost of our power; and our labour, I hope, will not be in vain. For if I may judge of you, from what I have observed of former students, your zeal in the acquisition of knowledge, will not be inferior to that of your teachers, in their attempts to communicate it. An unwearied ardour, in the prosecution of study, particularly among the students of medicine, has, for a long time, prevailed very generally at this place; and there is no reason to fear, that it will now be abated.

Our mutual exertions in the communication and acquisition of knowledge, cannot fail to give reciprocal aid to each other; and, I trust, that the patrons of Science, in return for the accommodation which they have afforded

us, will have sincere satisfaction, in observing our efforts for the public good. We cannot bestow too much attention in the improvement of an art, calculated for the preservation of life, for the alleviation of human misery. Nor does this conduct, on our part, require any sacrifice, either of interest or of ambition; for both our future honour and emolument, are inseparably connected with the faithful discharge of our duty. Our own advantage, therefore, combined with a due sense of gratitude to those whose contributions have erected this building, will, I trust, call forth, both from Professors and Pupils, such exertions, as will not only support the reputation, but extend the usefulness, of the University of Edinburgh, especially as a seminary of medical education.

From these remarks, I am naturally led to employ the present lecture, in offering a few observations on the office of a faithful teacher, and the duties of an industrious student."

Laft

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Last year, a small pamphlet was published, by the Reverend Sir William Clerke, Bart., Rector of Bury, in the county of Lancaster, intituled, "Thoughts upon the means of preserving the health of the poor, by prevention and suppression of epidemic fevers, addressed to the inhabitants of the town of Manchester, and of the several populous trading towns surrounding and connected with it."

In that pamphlet, among many other judicious observations, we find the following rules of prevention and suppression of epidemic fevers, for the use of the poor of the townships of Bury and Elton:

"An early notice of the attack of fever, must be given to the medical person appointed to attend the sick.

"The apartment of the sick, should be

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washed

washed with sope and hot water, that it may soon become dry.

“ The sick person should have clean linen, both about his person, and upon his bed.

“ If the bed clothes be dirty or offensive, fresh ones should be provided.

“ Whenever the sick person's linen is renewed, which it should often be, what he puts off, should be thrown into cold water, with a portion of sope-lee in it, and repeated quantities of cold water poured upon it, before it be washed.

“ The business of washing, should be performed in the open air.

“ When the sick person has occasion to go to stool, the pan which he uses, should contain some cold water ; and, immediately after each stool, cold water should again be poured into the pan, which is to be carried out of the chamber with no loss of time.

“ After the recovery of the sick person, the apartment in which he has been confined, should be well aired, white-washed with lime fresh slacked, and laid on hot. The windows to be set open every day.

“ If

“ If the bed has been fouled by the discharges of the sick person, it should be burnt,

“ The bed-clothes must be thoroughly soaked in water, then washed, and hung in the open air.

“ Each member of the family of the sick, should take, according to their age, a tea-spoonful or two, of unbruised mustard-seed at bed-time, to prevent the catching the disorder.

“ If the family have more apartments than one, that in which the sick person is confined, should be frequented only by those who are necessary to attend him.

“ Every member of that family should be precluded from entering into any neighbour's house, and be kept, as much as possible, from any intercourse with others.

“ The same rule should be observed, with respect to the visiting of neighbours or strangers, with that family.

“ To encourage a strict observance of these regulations, a reward will be paid, at the termination of the fever, by the Committee, to the master or mistress of the house, on producing a certificate from the attending surgeon.

“ By a strict observance of these rules, we trust, through the blessing of God, that the present misery of the poor will be alleviated; the ravages of a malignant and mortal distemper will be checked; and health, enjoyment, and usefulness to our fellow creatures, restored.

“ Temperance and cleanliness to the whole body of the poor, are here particularly recommended.

“ And the Committee, painful as it will be to them, will be obliged to withdraw their support from families, who disregard the foregoing resolutions.

“ These rules of prevention and suppression of fevers, are given to the public, upon the authority of a very eminent physician at Manchester, by whose humane attention to the poor, superior knowledge, and excellent judgment, the public are daily benefited.

By order of the Committee,

*The Rev. Sir W. CLERKE,
Chairman.”*

Bury, 30th Dec. 1789.

In addition to these directions, and in pursuance of a plan suggested by Dr Percival, an apothecary was appointed for the sick; and an inspector to attend to the distribution of cordial support; to answer for the proper delivery of bedding, blankets, and linen; to take notice whether the rules were observed or transgressed; and to give such information, to a committee appointed by the subscribers to a small fund for the relief of the poor, as the state of the sick families might require.

We are happy to find, that this plan has been attended with the best effects. Dr Percival, in a letter to Dr Duncan, informs him, that Sir William Clerke has lately favoured him with the following account of the success of it.

“ About four hundred and thirty persons, I apprehend, have received the benefit of a subscription in this town, for the relief of persons in the fever. But the relief, at first, was given so much without method, that I can form no conclusions, except upon three hundred and ninety, whose ages, sex, &c. have been noted. The number of persons who

have died by the disorder, since particular regulations took place, have been nineteen, viz. twelve women, six men, and one child. And they have fallen in this proportion: Under twenty years, 1 in 216; from twenty to thirty, 1 in 23; from thirty to forty, 1 in 15; from forty to fifty, 1 in 8; from fifty to sixty, 1 in 6; from sixty to seventy, 1 in 5. The only person attacked above seventy, died; so that, as far as the numbers will afford any conclusion, the disorder proves more fatal to women than to men; and is, with regular progression, more frequently fatal, in proportion as the person attacked is advanced in years. The whole number of men attacked by the fever, since any account has been kept regularly, has been sixty-nine: Of women, the number has been ninety-six. Upon the whole number, the proportion of deaths to the numbers attacked, has been 1 in 11 and a fraction, among men. The proportion of women who have died, to the numbers who have taken the fever, has been 1 in 8. From the age of twenty to thirty, the number of men attacked by the fever, exceeds the number of women. From thirty to fifty, the number of women exceeds that of men. The whole number of
women

women who died, is one third more than that of men ; and it appears to have taken place within the above period. I do not pretend to give any reason, but the obvious one which occurs, That, within that period of life, the families are in general the largest ; that children are more likely to communicate the infection than others ; and that the necessary and natural attention of women to the care of their families, exposes their lives more particularly to hazard.

“ The inference which these regulations has furnished, convinces me of the subtilty and diffusive quality of the disorder. It proves the necessity of unremitted attention to cleanliness, and the salubrity of the air in those places, particularly where numbers of children are employed together.

“ Whether any effectual regulations will ever generally take place in this country, is not for me to ascertain. I have only to endeavour to watch over this place and neighbourhood. And I hope, when the same visitation has fallen upon other towns, that the experience which this town has furnished, will

will facilitate the suppression of this fatal disorder.

“ The expences attending the suppression of this fever, have been as follows :

Medicine and attendance	L.	110	14	8
Wine	-	-	12	0 0
Inspector	-	-	24	12 0
Bedding, linen, &c.	-		83	3 4

L. 230 10 0

“ The article of white-washing was too trifling to be mentioned.”

* * * *

Dr Percival, in a letter to Dr Duncan, communicates to him the following observations respecting Rabies Canina.

“ I lately received a packet from Philadelphia, which, among other interesting particulars, contains the following fact relative to the Hydrophobia, communicated by Dr Western,

a physician of character and veracity, of the parish of St Ann's Bay, in the island of Jamaica. It is inserted in the American Museum for September, in the following words:

“ In January 1790, a negro boy was bitten in the hand by a dog, to all appearance as mad as I ever beheld one. The dog also bit two sheep, and was afterwards killed. Being called to the boy, a short time after he had received the bite, I immediately dilated the wound, and filled it with strong mercurial ointment, having in it a proportion of common turpentine, which caused it to inflame considerably, and discharge freely. I also gave him the Peruvian bark in substance with wine, for eight days, gradually increasing the dose; during which time, not the least symptom of Hydrophobia appeared. The boy continued perfectly well when I left the island, which was in June last. The two sheep, which were bitten nearly at the same time, died in ten days afterwards, raving mad. I believe this is the first case yet communicated to the public, of the successful employment of bark and wine, in the Hydrophobia.”

To

To this fact communicated by Dr Western, Dr Percival adds, " Since the publication of the little tract on the nature, cause, and cure of Rabies Canina, inserted in the second volume of my *Essays*, (4th edition, p. 363), I have been confirmed, by various facts, which have occurred, or been communicated, in the opinion, that this disease is to be considered and treated, as a malignant species of Tetanus. There seems to subsist no strict analogy between the action of the Canine virus, and that of the Lues Venerea, of the Small Pox, or of the Viper. These evidently affect the lymphatic system; and their progress into the course of circulation may be easily traced, which is not the case with the poison of a mad dog. This poison seems to exert its energy only on certain nerves, under certain conditions; and the chance is always great against its operation. So it is with wounds or injuries of the tendons, which are rarely, and only under very particular circumstances, succeeded by a locked jaw. Whereas the virus of the small pox, &c. seldom fails, when applied, of producing its baneful effects on the body, being transmitted into the system,

by

by absorption through a series of vessels, which are uniform and regular in their action.

* * * *

About nine years ago, Mr R. Mynors, an eminent surgeon at Birmingham, published a short treatise, intituled, "Practical Thoughts on "Amputation," &c. In that treatise, by much judicious reasoning, he strenuously recommends the union of divided parts by the first intention; a practice no less beneficial to the patient, than satisfactory to the humane practitioner. Mr Mynors informs Dr Duncan, that, from eleven years experience of the plan which he had formerly proposed, he is now happy to declare, that its success in his own practice, and in that of numerous respectable surgeons in various parts of Britain, who have privately, and in public hospitals adopted it, has answered his utmost expectations.

The

The same gentleman published also, in the year 1785, a history of the practice of Trepanning the skull, and the after treatment, with observations upon a new method of cure, illustrated by a case. In this, also, he very strongly inculcates the practice of uniting the wound which is formed in the operation, by the inflammatory adhesion. He now informs Dr Duncan, that since the publication of this book, he has the satisfaction to say, that several cases of fractured skulls, have, by different gentlemen, been successfully treated, according to the method which he had proposed. Four of these, in the course of their cures, fell under his own inspection.

* * * *

Dr Withering of Birmingham, in a letter to Dr Duncan, communicates to him the following intelligence respecting the *Angustura* bark, and the extract of *Hyosciamus*.

“ The

“ The Angustura bark, promises to be an useful addition to the *Materia Medica*. It has been serviceable in several cases of debility, connected with affections of the stomach and bowels, which did not admit the usual course of Peruvian bark, without the addition of opium. And in autumnal diarrhoeas, it has contributed much to the cure. It has succeeded well in some perfect, and in some indistinct intermittents. But I am not yet able to speak of it fully on the basis of large experience, as the medicine has only of late been diffused through the shops.

“ An elderly woman, the mother of many children, about a year ago consulted me, about some obstinate rheumatic affections in her limbs. I expected advantage from the internal use of the *Conium maculatum*; but she could not take pills or powders, on account of a difficulty in swallowing. And although the extract dissolved might have been got down, I had no faith in the efficacy of that medicine, as it is in general prepared. Her difficulty in swallowing, came on gradually, without any assigned cause; and for many years she had lived upon liquid food; or, if she had masticated
solid

solid food, she swallowed the juices, and gave the morsel to a favourite little dog. Nothing like disease was visible upon inspecting the throat; nor was there reason to believe, that any particular tumour existed lower down, either in or about the œsophagus. I gave her extract of Hyosciamus in solution. About a week after beginning it, she observed, that though her rheumatic affections continued as before, she could swallow better than she had done for many years. She was now directed to omit the Hyosciamus, and to take Tincture of Guaiacum twice in the day, and Dovers powder at bed time. After another week, the pains in her limbs were abated, though still very troublesome; but she did not swallow so well as when she took the first medicine. Another week was passed in the use of the Guaiacum and sudorific powder; and the rheumatism being now much relieved, she again took the Hyosciamus. In a few days she could swallow animal food, though not in large morsels, and she still retains this advantage."

I am well aware how little can be deduced, in medical practice, from a single instance.
But

But the publication of this, may perhaps occasion a farther trial of *Hyosciamus* in similar affections, which are not very uncommon, though generally found to be incurable.

* * * *

We are authoris'd to say, that the damages done during the late riots at Brimingham, to Dr Withering's collections in natural history, are not so great as to prevent the publication of the remainder of the third volume of his Botanical arrangement of British Plants; and that, notwithstanding some delay from the above-mentioned causes, it may be expected to appear in the ensuing spring.

* * * *

The following remarkable instance of the powers of worms, of the genus of *Tænia*, in re-
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taining life, has been communicated to Dr Duncan, by a gentleman of undoubted veracity.

“ One of the pointers of Mr S. which had been long ill, voided, in consequence of some violent purgatives, two *tæniæ*, each several feet in length. They were, when voided, in a convoluted state. A maid-servant who had seen the dog discharge them, washed them, and having put them on a large saucer, carried them up stairs, to shew them to her master. Mr S. intending to have them preserved in spirits, filled the dish with boiling water, in order to clean them more completely; and, at the same time, as they appeared perfectly alive, to kill them. By the boiling water, however, they seemed to be little if at all injured, as they continued, with little variation, the same twisting motions which they had before exhibited. After having in vain waited for their destruction from this ordeal, he poured off the water, now nearly cold, and substituted for it some very strong double whisky. But from that, they acquired additional vigour; and their motions, which before were languid,

languid, now became brisk and animated. To use Mr S.'s facetious expression, " they " appeared to be better for a dram." He supposed, however, that this violent agitation might only be a prelude to their death; and that it was occasioned by the pain arising from the destructive action of the liquor. But, after a considerable time, their life and activity continued, to his astonishment, unimpaired. And it was only by adding to the spirit a quantity of corrosive sublimate, that they were at length destroyed.

Can this obstinate tenacity of life be explained from the nature of the animal in which the *tæniæ* were bred? The *fæces* of a dog are a most corroding substance. In intestines containing such *fæces*, the *tæniæ* were generated, and lived. Having then a frame capable of resisting the influence of this corroding substance, by which they were constantly surrounded, it is not, perhaps, so much to be wondered at, that they should be able to sustain, without material injury, the action even of boiling water, or of the strongest spirit.

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Mr Thomas Pollard Peirce, student of medicine from Barbadoes, has communicated to Dr Duncan, the following information respecting the use of the Petroleum Barbadenfe.

“ I take the liberty of laying before you an extract of a letter from Barbadoes, relative to some successful trials made by my father, with the Petroleum, or Green fossile oil of that island. The cases in which the remedy was employed, were an obstinate and confirmed Lepra, and an occult Cancer of the breast. The subjects of both diseases, were females. The latter was a case of fourteen or fifteen years standing; and so dangerous and tormenting, that the use of the knife was strongly urged. In the leprous case, (says the author of this intelligence), I began with two table spoonfuls of the tar in the course of the first day; one in the morning, and the other
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in the evening. Sometimes it was swallowed alone, sometimes mixed with Barbadoes rum; and, at others, with weak spirit of Vitriol beverage. It is very necessary to remark, in this place, that for two or three months before the petroleum was used, the patient had taken ten or twelve ounces of genuine red bark, and had drunk freely weak spirit of vitriol made into beverage, and occasionally into punch. At first these medicines promised some degree of success; but it was of no long duration. She began the use of the tar on July 10th 1790. In the following night, she was purged and puked very smartly by it. These effects were succeeded by pains in all her joints, which, by degrees, subsided and went off. On the second day, three tea spoonfuls were given, and the dose gradually increased to three table spoonfuls daily. When perspiration happens, the matter discharged smells strongly of the petroleum.

“ *Aug. 6th.* The doses of tar were now increased to six table spoonfuls daily. One very favourable effect is, that the colour of the skin is several shades deeper than it was,

and the patient declares, that she feels better every day.

“ Every following week, a table spoonful of tar was added, till she took the quantity of nine table spoonfuls daily. Either in the month of September or October, she was attacked with rigours, shiverings, and other symptoms, which ended in an intermittent fever, through which she was safely carried.

“ *Jan. 7th 1791.* My patient wants nothing now but flesh and strength to be quite well. I design to send her into the country to drink and bathe, in Moody's rill, the chalybeate spring at the late Col. Waterman's estate. This I would have done before, had she not been suckling a very young child. This latter circumstance alone prevented the external use of the tar. Weak spirit of vitriol beverage was used often, along with the tar, of which last, she had taken about eight or nine English pints, when the fever came on.

“ She uses now about two or three table spoonfuls a day. This quantity will be gradually lessened, and at last discontinued.

“ With

“ With respect to the other case, the tumour was as big as a pullet’s egg, and very frequently produced most excruciating pains from below the short ribs, quite up to the collar bone. It was situated on the left side. The use of the petroleum was confined to simple external application : first rubbing the hand on the tar, warming it over the flame of a candle, and gently pressing and rubbing the tumour when painful. The application was frequently renewed. In a few days she felt much better ; and in seven or eight weeks, according to the account she gave me, was cured. Many years ago, the *Cicuta* and other medicines were tried, but without effect ; and I have reason to believe, that the tar itself was at first thought altogether to be an *anceps remedium*.”

“ Two other cases of *Lepra*, and *Cancer* of the nose, had occurred, when my father was about writing to me last. And, as by particular desire, the *Petroleum* will be used in them, I shall beg leave to submit to your inspection, whatever farther may take place in the employment of it. You will observe, that

I mention the green tar only. The other sort is black, and I believe is less esteemed, by the negroes and others, who have occasion to make use of it."

"Every tar hole, says my correspondent, that I have seen, has been at the foot of an hill, or in or near a gully. The soil is various, but generally a sand. The holes are nearly full of water, and the tar swims on the surface. The Green, being thin, is taken off with the hand; and the Black with a spoon, or the like. The water in the hole is commonly cool, and seldom two feet deep. When it overflows, the tar sometimes runs out. In the rainy season, very little Petroleum is collected; but in the dry time of the year, a good hole will yield half a gallon daily, and, about noon, it produces most."

Mr

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Mr Thomas Guilan, Surgeon in Antigua, in a letter to Dr Duncan, gives him the following account of a singular appearance in the ventricles of the heart, discovered on the dissection of a negro girl.

“ On the 25th of June last, I was called to visit a negro girl, about fourteen years of age, the property of Charles Manning, Esq. I found her very much emaciated, complaining of flying pains in the chest, with a quick pulse, and slight degree of fever, attended with a more considerable palpitation at the heart, than I had ever before observed. She had no appetite for food, or even for drink. She complained of great vertigo, which, I imagined, proceeded more from general debility, than any other cause.

“ Mr Manning informed me, that she had, for several months, been in the same situation, although by no means so weak, as she then was.

was. He observed, that she had formerly been affected with cough, but that it had left her some time before I saw her. He added, that she would sometimes drop down suddenly, upon using any violent exertion ; and that she was incapable of any hard labour. Her complaints, of late, had increased much, while her strength as rapidly declined. Her catamenia had never appeared.

“ Several different medicines were tried, by my advice, as well as that of Dr Samuel Athill, who also visited her. But her strength continuing to decline very rapidly, she died on the 29th of June.

“ I opened the body early next morning. Upon examining the thorax, I found no adhesion of the lungs to the pleura ; nor indeed any other mark which could indicate inflammation. The colour of the lungs was perfectly natural ; and upon cutting into them, I could discover neither tubercles, nor any signs of inflammation. And in the bronchial vessels, I found neither mucus nor pus.

“ The heart was remarkably large, which I soon found to proceed from the comparative magnitude of the ventricles, to that of the auricles,

auricles, which were preternaturally small indeed. Upon opening the ventricles of the heart, I found in each of them, but, particularly in the left, a considerable quantity of soft white-coloured matter, which had every appearance of being real fat. The quantity of this matter was so considerable, that in a collapsed state of the heart, it would have filled up about one fourth of the cavities. In none of the other viscera, could I discover any marks of disease; so that I cannot help imagining, that the cause of her complaints, proceeded from this affection of the heart alone. But how a deposition of fat could take place in an organ so subjected to muscular action, is more than I can pretend to explain."

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An ingenious medical friend, has communicated to Dr Duncan, the following singular particulars respecting his own case.

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“ I have been, for some years, subjected to a disease, which has afforded me an opportunity of making observations on it, which, as far as I know, are new. About six years ago, my hands began to be affected by a diffused dark red swelling, attended with heat, and a sort of stinging pain. This has, since, returned every winter; and its attacks are becoming more frequent, and the symptoms more severe. No vesicles, however, are formed; but it terminates by a desquamation of the cuticle. I feel a degree of listlessness and slight pyrexia; but so trifling, that I should not perceive it, if I did not know that it generally attends the disease; for I have no doubt that the disease is a species of Erysipelas, or of the Phlogosis Erythema of Dr Cullen’s nosology.

“ The symptoms are always aggravated by heat or cold, especially the latter, which seems to be often the exciting cause: They are aggravated also, by the use of spirituous liquors in small quantity, and even by a full meal of animal food. Though there be a preternatural heat in the affected parts, when exposed to a moderate warmth, yet the common temperature of the atmosphere produces a sensation of
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of great cold ; and I am obliged to wear gloves, even in a room, unless it be pretty warm. My fingers, when affected with the cold, grow livid, and benumbed.

“ The complaint yields to the antiphlogistic plan, though very slowly. During an attack in 1788, I happened to drink wine pretty freely ; and on the morning after, I found myself perfectly cured. I was unwilling to attribute this to a practice that seemed so preposterous ; but, to satisfy myself, I ventured to try the same method again ; and I have repeatedly since found, that it produced the same effect. I have observed also, that hard exercise, such as walking fast for some time, especially against a brisk wind, will suddenly remove all the symptoms. I once tried electricity, by taking sparks from the affected parts. This removed, for the time, the uneasy prickling sensation, and produced a glow of warmth ; and, in two or three days, the disease disappeared. At this time, however, I was using cathartics.

“ From these circumstances, I am inclined to adopt the opinion of Dr John Gahagan, delivered in his inaugural dissertation, *De Inflammatione*,

Inflammatione, published at Edinburgh in 1790. Whether inflammations may, with propriety, be divided into active and passive, I dare not venture to determine; but, in my case, there seem to be many proofs of a diminished tone of the parts affected. On this principle, may not all the phænomena be explained? as, by an increased impetus of the blood within certain limits, the vessels of the affected parts may perhaps suffer themselves to be preternaturally distended. But, when a sufficiently powerful stimulus is applied, the irritability of the muscular fibres may be excited to such a degree, as to enable the vessels to unload themselves."

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Dr Brandreth of Liverpool, in a letter to Dr Duncan, communicates to him the following observations:

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“ The advantages arising to patients, under various states of the Typhus fever, from washing with cold water and vinegar, have been, in many cases of my practice, for several years past, very conspicuous; and, in no instance within my observation, has this mode of treatment been productive of any unpleasant effect. I generally order it to be done, night and morning, with a large sponge. The patients are well dried, and put to bed. They usually express great pleasure from its effects, and a sense of great refreshment. It invariably lessens, not only the heat, but, in a singular manner, the hardness of the skin. It diminishes the frequency of the pulse, and often lessens, nay sometimes removes, for a time, the delirium. I have known patients, who refused not only medicine, but every kind of food, readily prevailed on, after the washing, to take whatever their friends offered. It is not improbable, that, ere long, I may lay a state of this practice before the public.

“ The use of large doses of opium, in certain cases of insanity, has, I believe, been more frequently administered in this town than any other; and, in many cases, with wonderful

ful good effects. The first time I employed it, was about twelve years ago ; and, since that time, I have given it to several patients. The practice is pretty general here. Dr Binns has given two scruples of solid opium at one dose, and, in four hours afterwards, one scruple, which restored his patient almost immediately. Dr Currie has had success from the same treatment. The largest dose I have given, was four hundred drops of well made Tinctura Thebaica. The relief was like a miracle. From the greatest possible furor, in a few hours my patient was calm and rational."

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The following extract of a letter from the learned Professor Hebenstreit of Leipzig, to Henry Hodgson M. D. has been lately communicated to us, and we presume will not be thought unworthy of the attention of the reader.

" Ern.

“ Ern. Hebenstreit, M. D. & P. viro amplissimo Henrico Hodgson, M. D. Ratisenæ.

“ Ne omni utilitate vacua sit epistola mea addam pauca de novissimis quibusdam chemi-
corum nostrorum inventis.

“ Nosti quam fallax sit tædiique plenum
scrutinium vinorum plumbo adulteratorum quod
cum liquore probatorio vulgo instituitur. Aliud
nuper proposuit Hahnemannus, M. D. Che-
micus haud ignobilis. Paratur ex æqualibus
partibus Ostrearum calcinatarum et Sulphuris;
Hepar Sulphuris calcareum. Hujus drachmæ
duæ, intermiscentur Cremoris Tartari drach-
mæ septem; affundantur aquæ libræ duæ. In
lagna ad $\frac{3}{4}$ plena et bene obturata concutien-
do per horæ quadrantis spatium agitantur.
Liquor seposito sedimento transfunditur in par-
vas phialas optime obturandas. Sic nascitur
Aqua acidula hepatifata, cujus ea vis est ut
guttulæ paucæ, vinum noxiis metallis infec-
tum nigrum reddant. Sincerum, vel innoxio
ferro contaminatum limpidum relinquant. Si-
mile quid, sed non idem, habet Fourcroy.”

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Dr John Bell of London, in a letter to Dr Duncan, gives the following article of medical news, which, he observes, has been communicated to him on unquestionable authority.

“ Some years ago, a Lieutenant-Colonel, in the service of the Duke of Wirtemberg, was attacked with a violent headach, for which he could assign no cause. As the severity of the complaint, deprived him of rest, and prevented him from discharging his duty, he consulted many eminent medical men, from whose prescriptions, he derived little or no advantage. The operation of the trepan was even recommended, and submitted to. Some violent febrile symptoms succeeded, but the wound, at length, healed favourably, though the pain still continued as before. Despairing of relief from medicines, he totally laid them

them aside, when he accidentally met with a person, who undertook to relieve his complaint. The remedy recommended, was of a very simple nature; but its efficacy was pronounced to be infallible, provided the patient would persevere, for a certain time, in the use of it. Willing to do any thing that promised even an alleviation of so distressing a disorder, he undertook to drink six quarts of spring-water, daily, for three months. He had, at first, no great faith in the remedy; but as custom soon reconciled him to it, he persevered. He was the more induced to this, on finding his complaint mitigated, at the end of a few weeks. Within the time prescribed, it was entirely removed; and, after having been upwards of eighteen months in a state, which deprived him of all enjoyment of life, he has now been nearly three years free from any attack of his disorder. No particular regimen was enjoined, except the cautiously avoiding excess, either in eating or drinking. I expect I shall hereafter be able to communicate to you, a more full account of all the particulars of this extraordinary cure, as the disease often baffles all our attempts to remove it."

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The Royal College of Physicians of Edinburgh, have been, for some time past, engaged, in preparing for publication, a new edition of their Pharmacopœia. And although it be little more than eight years, since the publication of the last edition of that work, yet, from the gradual progress of medical science, and particularly from the many improvements which have, of late, been made in pharmaceutical chemistry, there can be no doubt, that it will now appear with very considerable alterations.

This work is already in the press, and will probably be published in a few months.

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Dr John Gardiner, of Edinburgh, already favourably known to the medical world, by
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his ingenious treatise, intituled, "Observations on the Animal œconomy," has prepared for publication, a new work upon the Gout, which, we are persuaded, will well deserve the attention, both of the medical practitioner, and of those, also, subjected to frequent returns of that painful distemper.

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Dr Alexander Hamilton, Professor of Midwifery, in the University of Edinburgh, who, some months ago, published a new and improved edition of his work, intituled, "Outlines of the Theory and Practice of Midwifery," has, at present, in the press, a new edition also, of his Treatise of Midwifery, comprehending the management of the complaints of females, and the treatment of children in early infancy. This treatise, which first appeared about ten years ago, and then met with a very favourable reception, will now be pre-

sent to the public, with considerable alterations and additions.

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Dr Francis Balfour, from Calcutta, who lately published, at Edinburgh, a treatise on putrid intestinal remitting fevers, in which, he attempted to investigate and define, the laws of the febrile state, and Sol-Lunar influence, and to apply those laws, to explain the nature of the various forms, crises, and other phænomena of fevers, has at present in the press, at this place, some additional observations, tending to confirm the doctrines which he formerly delivered.

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Dr Thomas Trotter, long a Surgeon in the Navy, who some time ago published on Sea Scurvy, a disease in which he has had extensive practice, has at present in the press, a new edition of his work, which will probably
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be published early in the year 1792. This publication, we are told, though under the title only of a new edition, may yet be considered as a new work. For, from farther observation, in actual practice and much reflection on the subject, Dr Trotter is now of opinion, that the doctrine of Putrescency is equally untenible with those of Dr Milman and others, against which, he had formerly urged strong and even insurmountable objections. He now attempts to establish a new proximate cause, supported on the method of cure, and on the doctrines of Pneumatic Chemistry, as it has of late been styled.

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A new edition of Dr Cullen's First Lines of the Practice of Physic, is now in the press, at Edinburgh, and will probably be published in a very short time. We need hardly observe, that this work was originally intended as a text-book for the lectures of the ingenious and experienced author, while he filled the practical chair in the University of Edinburgh. But as students

can no longer have an opportunity of hearing his explanatory observations ; to this edition, notes, we are told, are added, illustrating abstruse points, and containing the formulæ and doses of medicine, which, in the text, are mentioned only in general terms.

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A new edition of Dr Cullen's Synopsis Nosologiæ Methodicæ, is also about to be published, in two volumes, 8vo, and said to be more correct than any former one.

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A new edition of the Edinburgh new Dispensatory, intended as an improvement of that of Dr Lewis, is nearly ready for publication. Besides many corrections of the former work, and additional observations respecting different articles ; in this edition, a full account is given of the new doctrines in chemistry, which have lately been published by Mr Lavoisier

voisier. This account is drawn up by Dr Rotheram, a gentleman well known to the medical and philosophical world, by his defence of the sexes of plants, and several other ingenious publications.

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The treatise on the Venereal disease, by Mr Benjamin Bell, Surgeon in Edinburgh, which we mentioned in our last volume, is now in the press, and will probably be published in a few months.

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Dr William Farquharson of Edinburgh, has prepared for publication, the result of experiments on inoculation for the Small-pox, made with a view to remove the prejudices of the common people against the practice, by pointing out its perfect safety, and endeavouring to shew the propriety of parents, who are out of the reach of medical aid, inoculating
their

their own children. This treatise, which is intended to be addressed to the clergy of Scotland, will, probably, be published in the course of the ensuing winter.

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Mr Robert Kerr, surgeon in Edinburgh, already well known to the learned world, by his translations of the Elements of Chemistry in a new systematic order, by Mr Lavoisier, and of an Essay on the new Method of Bleaching, by means of oxygenated muriatic acid, by Mr Bertholet, has distributed proposals for printing, by subscription, a translation of the Animal Kingdom, or a systematic arrangement, nomenclature, and description, of every known animal, containing a complete account of all the genera, species, and varieties of quadrupeds, birds, amphibious animals, reptiles, serpents, fishes, insects, and worms, included in the works of the celebrated Sir Charles Linnæus, from the improved edition, with numerous additions, of the *Systema Naturæ*, by Professor Gmelin, of the university of Gottingen, together

ther with large additions from other zoological writers, reduced to the Linnæan method of classification.

To study the works of creation with intelligence, is the exclusive privilege of man, and highly exalts his dignity above all other animated beings. Every means, therefore, which can facilitate the acquisition of this vast and noble object of human knowledge, must certainly be conducive to promote the most rational happiness of mankind.

For the attainment of this Philosophy of Nature, it is necessary to possess some knowledge of the objects of creation, as they are connected with each other in one vast chain of being, and as arranged by nature under greater or lesser links of relation. Hence, in all ages, numerous attempts have been made to reduce the apparently endless confusion of natural bodies, under such a system of nomenclature, arrangement and description, as might render the acquirement of these views as easy and as familiar as possible.

It is not necessary to give a comparative view of the merits of different systems; for, it will readily be granted, that the palm of excellence

cellence has been allowed, by the learned of every country in Europe, to the arrangement of the great Linnæus, as contained in his justly celebrated work, the *Systema Naturæ*. It will not therefore be deemed an idle employment, to attempt to translate into English, a work of such general importance, and which contains so much interesting information. And we sincerely hope, that adequate encouragement may be given to it by the public.

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Dr Kirkland of Ashby de la Zouch, already well known by his valuable writings on different subjects in medicine and surgery, is now printing a work at Warrington, on the utility of Opium in certain species of Apoplexy and Palsy.—Dr Haygarth of Chester, engages the same press with the sketch of his plan for exterminating the Small-Pox, which is, we are told, nearly printed off.

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The Literary and Philosophical Society of Manchester, after a temporary interruption, have again resumed their meetings. They have received many interesting communications, and there is reason to hope, that they will be able to offer a fourth volume of Memoirs to the public, some time during the course of next year.

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Sir Joseph Banks, President of the Royal Society of London, with that liberal spirit and love for Science, which have long distinguished his conduct, has been at the expence of having engraved, and printed on a fine paper in folio, "*Icones Selectæ Plantarum quas*
in

in Japonia collegit et delineavit Engelbertus Kæmpfer, ex archetypis in Museo Britannico asservatis." The work contains fifty plates, and is dedicated to the Trustees of the British Museum. It is not intended for sale, but is given away by the generous editor to friends, public libraries, &c.

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Professor Schreber is at present engaged in publishing, at Francfort on the Maine, a new and improved edition of the *Genera Plantarum* of Linnæus.

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The Abbé Vitman has published, at Milan, a prospectus of a work which he intends to print in six volumes octavo, intituled, "*Summa plantarum*"

plantarum quæ hætenus innotuerunt methodo
Linneana per genera et species digesta."

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Proposals have been distributed for printing, at Berne, a new edition, being the third, of Haller's *historia stirpium indigenarum Helvetiæ*. Messrs Haller and Wittembach, who undertake to superintend it, will be assisted by the communications of many Swiss botanists. Besides upwards of one hundred and twenty new species, this edition will include a great number of Synonyma from Linnæus, Reichard, Murray, &c. The editors hope to be able to publish it about Easter 1792.

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The American Philosophical Society at Philadelphia, to whom we are already indebted

ed for two volumes of Transactions, intend soon to publish a third. The papers which are to form it, are in the hands of one of the members, who is employed in arranging them for publication.

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Dr John Clark of Newcastle, has been, for some months past, engaged in printing a new edition of his book, on the Diseases in Hot countries, particularly in the East Indies. He has now extended the same method of cure there proposed, to several of these distempers when occurring in this country. The work, therefore, will now appear under the following title, "Observations on the diseases in long voyages to hot countries, especially on those which prevail in the East Indies, and on several of the same distempers, as they appear in Great Britain." The chief improvement, in the present edition, consists, we are told, in recommending the use of Mercury

cury in Dyfentery, and in Acute Rheumatism, as well as in the chronic state of that disease. This practice, we hear, Dr Clark has followed for several years past, and, he thinks, with success far superior to that which attends the common modes of treatment.

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Dr Thomas Garnet, of Harrogate, in a letter to Dr Duncan, gives him the following account of an intended new publication on the mineral waters of that place.

“ I have been lately engaged in a series of experiments on the mineral waters of this place, which, I hope, will throw some light on their chemical nature, which has hitherto been but little known. I have discovered, both in the sulphurated and chalybeate waters, a species of air, which has not been suspected by the chemists who have attempted to analyse them. This air is the azote of Mr

Lavoisier, being the elastic fluid which, with regard to quantity, forms so considerable a part of our atmosphere. For, according to him, the air of our atmosphere consists of two thirds of azote, and one third of oxygen, or pure vital air. Though I procured this air from the mineral waters, I could neither combine it again with them, or with common water. It is loosely attached to the water, and the greatest part of it is separated, before the fluid arrives at its boiling heat. This air separates spontaneously, both from the chalybeate and sulphur-waters; and from some of the latter, in such large quantities, that in less than five minutes, I have collected a quart bottle full of it, by holding the bottle filled with water, and inverted, into the well, with a funnel in its mouth, to catch the bubbles as they rise. I have repeated my experiments so often, that I have no doubt with regard to the nature of this fluid.

“ With regard to the azote, found in the sulphur-waters, we have reason to suspect, from many experiments, that the hepatic air attracts the oxygen from the atmospheric air, which is combined with the water, and, with it,

it, forms sulphur ; and that the sulphur which is deposited in the crevices of the channels in which the water runs, is derived from this source, as the water itself contains not a particle of sulphur. Some of the wells which are much exposed to the air, as well as the large open vessels of water collected for baths, after standing some hours, are covered with a pelticle of real sulphur, which is, most probably, formed by the union of the hepatic air with the oxygen of the atmosphere.

“ Notwithstanding the opinion of Mr Lavoisier, that sulphur is a simple body, I have strong reasons for suspecting that it is a compound, the radical principle, or base, of which, is hepatic air ; and that this hepatic air, united with a certain portion of oxygen, forms sulphur ; with a greater quantity, it forms volatile sulphureous acid ; and, with a still greater quantity, it forms the vitriolic, or sulphureous acid. I am now engaged in a set of experiments, by which I hope to determine this point ; which I intend to lay before the public, in the course of next year.”

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The following program has been issued by the Medical Society of London, respecting their prize-medals.

The Society resolve to give, annually, a gold medal, called the Fothergillian Medal, of ten guineas value, to the author of the best dissertation on a given subject, to which the learned of all nations are invited as candidates.

The medal for the year 1792, will be adjudged to the author of the best dissertation in answer to the following question : What are the effects of mineral poisons, upon living animals, and, more particularly, upon mankind, when taken internally, and applied externally ; and what are the most efficacious means of counteracting these effects ?

Question for the year 1793 : What are the effects of vegetable poisons upon living animals, and, more particularly, upon mankind, when taken internally, or applied externally ;
and

and what means are most efficacious in counteracting these effects?

For the year 1794: What are the effects of animal poisons, either by internal or external applications, upon living animals, and especially upon mankind; and what are the most efficacious means of counteracting these effects?

For the year 1795: What are the effects of aërial poisons, upon living animals, and especially upon mankind; and what are the most efficacious means of counteracting these effects?

It is desired, that every answer to any of the foregoing questions, may, as far as possible, be founded on actual experiment, or well-authenticated facts: and that the several competitors will, if practicable, ascertain the specific or characteristic symptoms of each particular poison, in order to assist medical practitioners, not only in their endeavours to afford relief, but in the evidence they may be required to give, upon questions of this nature, in any court of justice.

The following regulations are to be observed respecting this medal.

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1. Each

1. Each dissertation shall be delivered to the Secretary in the Latin, English, or French language, on or before the first day of November of the preceding year; and the adjudication of the medal, shall take place in the last week of the ensuing February.

2. With each dissertation, shall be delivered a sealed packet, with some motto or device on the outside; and within, the author's name and designation; and the same motto or device shall be put upon the dissertation, that the Society may know how to address the successful candidate.

3. No paper, with the name of the author affixed, can be received; and if the author of any paper shall discover himself to the council, or to any member thereof, such paper shall be excluded from all competition for the medal.

4. All dissertations, the successful ones excepted, shall be returned, if desired, with the sealed packets unopened.

The Medical Society give also two silver medals annually; one of which is adjudged for the best essay read before the Society, within
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the year, written by a fellow; the other, for the best essay by a corresponding member, or by any person not a member of the Society.

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The Academy of Sciences and Belles Lettres at Lyons, have proposed the following prize-question for 1791.

Quelles sont les causes de l'ascension de la sève dans les arbres au printemps, et celles de son renouvellement dans le mois d'Aout ou de Juillet suivant le climat?

The prize is a gold medal, value three hundred livres.

The same Society have proposed the following question for 1792.

Trouver le moyen de rendre le cuir impermeable à l'eau, sans alterer sa force ni sa souplesse, et sans en augmenter sensiblement le prix.

This prize is also a gold medal, value three hundred livres.

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The Philosophical Society of Rotterdam, have proposed the following prize-questions for 1791.

1. Quels sont les causes et les moyens qui hatent la putrefaction, la moderent, ou l'arrestent, soit dans le corps, soit dehors? Quels avantages peuvent resulter de ces connoissances, pour les diverses sciences, principalement pour l'art de guerir?

2. Quelles sont les meilleurs machines pour venir au secours des sourds, ou de ceux qui ont l'oreille dure? Y a-t-il de regles determinées qu'il faut suivre pour la construction et l'usage de ces machines?

3. L'endurcissement des glandes, le cancer, et les fievres intermittentes, sont-ils propres à l'homme? et si cela est, quelles sont les causes de cette particularité, quels sont les caractères par lesquels les deux premieres maladies se distinguent des autres de même espece? est on fondé de croire qu'on peut les prevenir et guerir

guerir aussi heureusement que les fièvres intermittentes ?

4. Quel est le véritable usage qu'on peut faire des observations météorologiques ? De quelle utilité sont-elles en particulier pour la médecine, ainsi que pour la société civile en général ? Quelle est la meilleure méthode d'en faire l'application ?

The same Society have proposed the following prize-questions for 1792.

1. Quelles sont les parties constitutives naturelles de l'urine d'un homme sain ?

2. Quelles sont les maladies auxquelles les Européens de retour des Indes Orientales sont sujets ? Quelles en sont les causes ? Quelles sont les meilleurs moyens de les prévenir ?

The value of each prize is thirty ducats.

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The Royal Society of Medicine of Paris, have proposed the following new prize-questions, besides repeating and continuing several

veral of those inserted in our former volumes, as extracted from their programs.

1. A prize of 600 livres; memoirs to be sent by the 1st of May 1792.

Determiner d'après les découvertes chimiques modernes et par des expériences exactes, quelle est la nature des alterations que le sang éprouve dans les maladies inflammatoires, dans les maladies febriles putrides, et dans le scorbut.

2. A prize of 550 livres; memoirs to be sent by the 1st of December 1791.

Y a-t-il quelque analogie entre le scorbut et les fièvres de prison de Pringle; les lentes nerveuses d'Huxham, ou celles de vaisseaux, décrites par d'autres auteurs; et de quelle utilité ces recherches peuvent-elles être pour le traitement de ces différentes espèces de maladies?

3. A prize of 600 livres; memoirs to be sent by the 1st of May 1792.

Determiner s'il y a de signes certains par lesquels on puisse reconnoître que les enfans
naissent

naissent infectés de la maladie vénérienne ; dans quelle circonstance elle se communique des meres infectées aux enfans, de ceux-ci aux nourices, et reciproquement ; quelle est la marche de cette maladie comparée avec celle dont les adultes sont atteints ; et quel doit en être le traitement.

4. A prize of 600 livres ; memoirs to be sent by the 1st of May 1791.

Determiner par des experiences exactes, 1. Quelle est la nature de l'humeur qui sort par la voie de transpiration insensible. 2. Quelle est l'influence atmospherique sur cette evacuation. 3. S'il existe des rapports avec la quantité de l'humeur que cette secretion fournit, et les mouvemens de la circulation, et de la respiration.

Memoirs on all these different subjects, must be sent, with the usual precautions for concealing the name of the author, addressed to M. Vicq-d'Azyr, rue de Tournon, and under cover to M. de Lessart, Ministre de l'Interieur à Paris.

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The College of Physicians of Edinburgh, besides being engaged in revising their Pharmacopœia, have at present several other subjects under consideration, which may, we hope, tend somewhat to medical improvement in that city. They have appointed committees of their number, for taking particularly into consideration the following subjects :

1. For considering in what manner houses for the reception of lunatics in Edinburgh, and its environs, may be best regulated and improved.

2. For considering the most effectual methods of encouraging the practice of inoculation among the lower ranks.

3. For considering upon what plan vapour-baths could be most easily and advantageously established in the city of Edinburgh.

4. For considering whether any improvements, or additional conveniences, could with ease be introduced into the practice of sea-bathing in the neighbourhood of Edinburgh.

5. For considering upon what plan the bills
of

of mortality, kept for the city and neighbourhood of Edinburgh, may be most easily freed from their present defects, and brought to such a state of perfection, as to afford a foundation for reasoning, both in medicine, and in political œconomy.

On all these subjects, reports have been given in, suggesting different improvements; and steps have been taken by the College for carrying these suggestions into execution. We hope, in a future volume, to be able to give our readers an account of the advantages resulting from them; and we flatter ourselves, that what is thus introduced with benefit to the public at Edinburgh, may be adopted with advantage at other places.

At present, we shall only observe, that in consequence of the report of the committee, respecting inoculation, the College of Physicians, in conjunction with the College Surgeons of Edinburgh, inserted an advertisement in the newspapers, offering gratuitous inoculation to the poor, during the months of September and October: And they, at the same time, addressed the following circular letter to all the clergymen, of every persuasion, in Edinburgh.

“ SIR,

“ S I R,

“ The Royal Colleges of Physicians and Surgeons of Edinburgh, have observed, with sincere regret, the numerous deaths which have taken place from the natural small-pox. Being fully convinced, that many lives may be saved by timely inoculation, they are very desirous that the benefit of this important discovery should be extended to the children of the lower class, in the same manner as it is at present enjoyed by those in better circumstances. They have, therefore, by public advertisement, offered their assistance, gratis, to all who shall make application to them for that purpose, during the months of September and October.

“ There can be no doubt, that the persuasion of the clergy, properly exerted, would have very considerable influence in removing those prejudices which have hitherto prevented the practice of inoculation from becoming general; particularly, by convincing parents, that they are not guilty of any temptation of Providence, as some of them erroneously imagine, when they subject their children to inoculation

tion with the view of preventing a fatal disease; but that, on the contrary, they will be highly culpable, if they neglect to employ the means with which Providence has furnished them, for preserving the lives of their offspring.

“ We take the liberty, therefore, of giving you this information of the intended plan, and doubt not, that you will exert your best endeavours, for promoting an undertaking, which can have no other object in view, but the public good. We are,

S I R,

Your most obedient servants,

A N D R E W D U N C A N,

President of the Royal College of Physicians.

W I L L I A M I N G L I S,

President of the Royal College of Surgeons.

This letter has produced many very strong admonitions in favour of inoculation, both from the pulpit, and in private. But besides these, a truly pious and most respectable clergyman, has been at the expence of printing and distributing among the lower class, a small pamphlet, intituled, “ *A reply to the religious scruples against*

against inoculating the Small Pox," which contains plain, short, and convincing answers, to the objections which some have made to this practice, in a religious point of view.

Although it cannot be alleged that these measures have at once had the effect of overcoming the prejudices of the vulgar, yet they have, at least, had some influence. And as far as we have been able to learn, of a considerable number of children who have been inoculated gratis in Edinburgh, during the months of September and October, every one has not only recovered, but has had the disease in a very mild form; which will probably be more powerful than any arguments, in combating prejudice, among the vulgar, and leading to more extensive inoculation in future years.

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We announce, with regret, the deaths of the following eminent medical practitioners.

October 1789, at Philadelphia, Dr John Morgan, Professor of the Theory and Practice of
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of Medicine in that city, Fellow of the Royal Society of London, and Member of the Royal Colleges of Physicians, both of London and Edinburgh. Dr Morgan obtained the degree of Doctor of Medicine from the University of Edinburgh, in the year 1763; and, on that occasion, wrote an ingenious inaugural dissertation, *De puris confectione*; but he could by no means be considered, which he seems to have imagined, as having the merit of being the inventor of the opinion which he held on this subject; for the same idea had long before been published by the late celebrated Dr Thomas Simson of St Andrews, in his dissertations *De re medica*, who, to use his own words, considered an issue, as being a *Nova quasi glandula*.

March 1790, at Philadelphia, Dr Abraham Chovet in the 86th year of his age. Dr Chovet visited patients till within a few weeks of the time of his death. He made it his dying request, that no bell should be tolled at his funeral, as he did not wish to disturb the sick

by such an unnecessary, and, to them, such a distressing noise.

February 10th, 1791, at Oldenburgh, Dr George Christian von Oeder, author of the *Flora Danica*. He was born at Anspach, and studied medicine at Gottingen. He was particularly attached to botanical studies; and, on the recommendation of the celebrated Dr Haller, he was appointed Professor of Botany at Copenhagen.

April 3d, Dr John Berkenhout, well known to the literary world, by many learned publications. In early life, he was an officer, both in the Russian and British armies. When he studied medicine at Edinburgh, in the year 1764, he was known by the name of Captain Berkenhout; and at that time, he published a botanical lexicon, a very useful work for the young student in that science. In 1765, he obtained the degree of Doctor of Medicine from the University of Leyden; and, under that title, became the author of the *Pharmacopœia Medici*, and several other works in the
line

line of medicine and medical philosophy. But his talents were by no means confined to the cultivation of medicine alone. Besides writing on many different subjects, he was employed also in the service of the State. He accompanied the commissioners who were sent to New York, with the view of obtaining a reconciliation between America and Great Britain; and he was imprisoned by order of Congress.

As a reward for his services and his sufferings, he afterwards enjoyed a pension from Government.

April 15th, Dr Alexander Garden, formerly an eminent practitioner in Charlestown, South Carolina.

April 16th, 1791, at Edinburgh; Dr John Stedman, Physician in that city, Fellow of the Royal College of Physicians, &c. Dr Stedman, during a long life, uniformly supported, among all who had the happiness of being acquainted with him, the character of an able physician; an elegant scholar; and an amiable

miable man. He was for some time Physician to the Royal Infirmary at Edinburgh; but finding himself unable for the duties of the office, in consequence of advanced age, and an impaired state of vision, he resigned the office. Even the almost total loss of his sight, however, did not prevent the continuance of his literary pursuits; and the public are indebted to him for several ingenious productions, both in the line of Medicine, and of Belles Lettres. More than twenty years ago, he published a volume of Physiological essays, containing many ingenious observations on the pulse, on menstruation, on insalutary constitutions of the air, &c. He was the author, also, of a very elaborate dissertation on the constitution of the Roman legion. After being far advanced in life, he published an elegant poetical translation into English, of Horace's Art of Poetry. And an anonymous work, intituled, "Lælius and Hortensia, or Thoughts on Taste and Genius," is very generally attributed to him.

May 22d, at Gottingen, Dr John Andrew
Murray, Knight of the order of Wasa, aulic
Counsellor

Counsellor to his Britannic Majesty, ordinary Professor of Physic and Botany, and superintendant of the Botanical Garden at Göttingen.

Professor Murray was a native of Sweden, and born at Stockholm, on the 27th of January 1740. He was the son of a respectable clergyman of that city; and to his father he was indebted for the early cultivation of those talents, which soon distinguished him among his fellow students. At the age of sixteen, he was sent to the University of Upsal. There his superior abilities, and the bent which his mind had acquired to pursuits of natural history, recommended him to the notice and protection of the illustrious Linnæus. A reciprocal esteem and attachment soon commenced between them, which continued uninterrupted till the death of Linnæus; and several passages, in writings which Professor Murray has published since that event, testify his regard for the memory of his amiable preceptor.

When Dr Murray had finished his course at Upsal, he formed the resolution of travelling

into other countries of Europe, with the view, not only of extending his knowledge, but also, of freeing himself from those prejudices which are but too apt to attach themselves to one, entirely confined within the limits of his native country. But deeming it disgraceful to visit other countries, when he had but a superficial acquaintance with his own, he devoted the Summer of 1759, to a tour through Sweden. In this tour, his attention was chiefly directed to objects in natural history and œconomy. On his return to Stockholm, he first determined to visit the University of Gottingen, which was in high repute as a school of Physic, and in which his brother had obtained a Professorship in Philosophy. At Gottingen, he obtained the degree of Doctor of Medicine in the year 1763; and on that occasion, he published, and defended an inaugural dissertation, *de fatis variolarum infectionis in Suecia*. The year after his graduation, he was appointed extraordinary Professor of Physic at Gottingen; and on the death of Professor Buttner in 1769, he succeeded to the botanical chair,
and

and to the rank of ordinary Professor of Medicine.

Professor Murray has long been well known to the medical and philosophical world, by many valuable publications. Among many others, we may mention the following:

Enumeratio vocabulorum quorundam, quibus antiqui linguæ Latinæ auctores in re herbaria usi sunt. 4to, Holm. 1756.

Commentatio de arbuto uva ursi. 8vo, Gottin. 1765.

De hydrophobia absque morfu prævio. 4to, Basil. 1765.

Historia infectionis variolarum in Suecia, ad novissimum tempus protracta. 8vo, Gottin. 1767.

Observationes de vermibus in Lepra obviis, juncta leprosi historia, et de lumbricorum setis observationes. 8vo, 1769.

Prodromus designationis stirpium Göttingensium. 8vo, Gottin. 1770.

Enumeratio librorum præcipuorum medici argumenti. 8vo, Lipsiæ, 1773.

Programma de tempore corticis Peruviani

in tussi convulsiva exhibendi. 4to, Gottin. 1776.

Differtatio de catechu. 4to, Gottin. 1779.

Oratio de limitanda laude librorum medicorum practicatorum usui populari destinatorum. 4to, Gottin. 1779.

De medendi tinea capitis paralipomena. 4to, Gottin. 1782.

Difficultates in curatione morborum infantilium obvenientes. 4to, Gottin. 1782.

Differtatio de tempore exhibendi emetica in febribus intermittentibus maxime opportuno. 4to, Gottin. 1782.

De laude magnetismi sic dicti animalis ambigua. 4to, Gottin. 1789.

From these different publications, the reader may form an idea of his extensive and varied abilities in medical literature. But the works by which he has been more distinguished than by any other, are, his two editions of the "Systema vegetabilium of Linnæus," and his "Apparatus medicaminum tam simplicium quam præparatorum et compositorum in praxeos adjumentum consideratus."

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Into the first of these works, he has introduced almost every well ascertained botanical discovery that has been made, since the publication of the latest editions of the *Systema Naturæ* by Linnæus himself.

The last work, as far as respects the vegetable kingdom, may be considered as the most valuable system of *Materia Medica* yet extant. In it, the vegetables are arranged according to their natural orders. And the 5th volume concludes the *Fungi*, the last of his natural order; and is terminated with an index to the whole. In the preface, however, he announced his intention of publishing a supplementary volume, for the farther illustration even of the vegetable kingdom. But, although death has now put a period to his labours, yet there is reason to hope, that the materials which he has left behind him for the completion of this useful work, will fall into the hands of some able and industrious physician, who, by continuing and completing this publication, may, in some degree, diminish the loss which medical science has sustained by his death.

June

June 4th, at Glasgow, Dr Alexander Stevenson, Professor of Medicine in the University of that city. Dr Stevenson was the son of an eminent physician in Edinburgh, well known by several ingenious papers in the Edinburgh Medical Essays. Dr Stevenson obtained the degree of Doctor of Medicine from the University of Glasgow, in the year 1749. When Dr Cullen, on being appointed a Professor in the University of Edinburgh, left Glasgow, Dr Stevenson settled in that city, and soon became an eminent practitioner. When Dr Black was brought from Glasgow to Edinburgh, Dr Stevenson succeeded him as Professor. But some years before his death, his academical duties were devolved upon his nephew, Dr Thomas Hope, who had been appointed Professor in conjunction with him. He was justly distinguished as an able and discerning Physician.

June 14th, 1791, at Knayton, Dr Charles Bisset, an eminent practitioner, and author of several valuable publications; particularly an
essay

essay on the medical constitution of Great Britain. Dr Bisset, after studying medicine, entered, at an early period of life, into the army. Though not belonging to the corps of Engineers, he distinguished himself so much in that line, as to obtain the notice and patronage of his late Royal Highness, William, Duke of Cumberland, and was by him raised to the rank of Captain. But being reduced to half-pay after the peace, which terminated the Flanders war, he resumed his medical studies, and made a distinguished figure, both as a practitioner, and an author.

Aug. 22d, 1791, at Gottingen, Professor Michaelis, deservedly celebrated for his literary productions, particularly for his treatise *De Angina Polyposa*.

Since

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Since the publication of our last volume, Dr John Lorimer of London, Dr William Moncrieffe of Bristol, Dr Andrew Fillan of Dominica, Dr James Home of Edinburgh, Dr James Currie of Liverpool, Dr John Coakley Lettsom of London, Dr Nicolas Bindon of Edinburgh, Dr Thomas Arnold of Leicester, and Dr John Yule of Edinburgh, have been elected Fellows of the Royal College of Physicians of Edinburgh.

Dr Augustus Gottlieb Richter of Göttingen, and Dr J. Gott. Walterus, of Berlin, have been elected Honorary Fellows of the College of Physicians of Edinburgh.

Mr Henry Johnstone, Mr William Ritchie, and Mr John Walker, have been admitted Fellows of the Royal College of Surgeons of Edinburgh.

The

The following gentlemen have been admitted members of the Royal Society of Edinburgh :

June 4th, 1791.

James Clerk, M. D. of the island of Dominica.

Mr William Lochhead, surgeon, of Antigua.

Mr Alexander Anderson, superintendant of the Royal Botanical Garden, St Vincents.

William Roxburgh, M. D. Madras.

J. Braithewhaite, Esq; London.

Mr Le Chevalier, of Paris.

John Burnet, Esq; advocate, Edinburgh.

Charles Scott, M. D. London.

June 27th, 1791.

Robert Townson, Esquire.

James Anderson, M. D. Madras.

Rev. Dr James Bell, Coldstream.

State

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State of the Thermometer, Barometer, and Rain, during the year 1790, at mid-day, according to observations made about a mile from the city of Edinburgh.

MONTH.	THERMOMETER.			BAROMETER.			RAIN. Inches.
	High.	Low.	Med.	Highest.	Lowest.	Medium	
Jan.	50	30	42	30.25	28.48	29.69	1.96
Feb.	54	38	47	30.12	29.40	29.77	1.75
Mar.	55	44	49	30.87	27.21	29.92	0.85
Apr.	55	38	46	30.25	29.25	29.04	2.53
May	61	42	54	30.21	29.10	29.68	2.49
June	73	51	60	30.02	29.10	29.67	2.90
July	68	54	63	29.91	28.82	29.52	1.86
Aug.	68	53	61	29.82	29.21	29.55	3.27
Sep.	62	46	55	30.12	28.90	29.67	2.67
Oct.	64	44	54	30.05	28.85	29.57	2.12
Nov.	50	35	43	30.35	28.85	29.64	2.51
Dec.	50	30	36	30.37	28.45	29.48	2.61
Whole Year.	73	30	50.8	30.87	27.21	29.60	27.52

State

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State of the Thermometer, Barometer, and
Rain, during the year 1790, according to
observations made at the apartments of the
Royal Society of London.

MONTH.	THERMOMETER.			BAROMETER.			RAIN. Inches.
	High. Deg.	Low. Deg.	Med. Deg.	Highest Inches.	Lowest Inches.	Medium Inches.	
Jan.	52	32	40	30.47	29.27	30.07	0.90
Feb.	55	33	43	30.62	29.88	30.25	0.11
Mar.	56	33	45	30.65	29.83	30.26	0.12
April	58	35	44	30.30	29.38	29.86	1.47
May	66	47	56	30.14	29.50	29.90	2.89
June	86	53	60	30.35	29.49	30.03	0.70
July	73	53	62	30.20	29.29	29.84	1.70
Aug.	77	51	63	30.16	29.64	29.97	1.99
Sept.	68	45	56	30.42	29.31	30.00	0.36
Oct.	64	39	52	30.40	29.62	29.89	1.10
Nov.	53	32	44	30.40	29.02	29.81	2.51
Dec.	52	30	40	30.38	28.80	29.88	2.09
Whole Year.	86	30	50.9	30.65	28.80	29.98	16.00

S E C T.

S E C T. IV.

List of New Books.

A NEW translation of the Pharmacopœia of the Royal College of Physicians of London of the year 1787, with notes critical and explanatory, doses of the several preparations, likewise a table of the quantities of opium and quicksilver in the compound medicines which contain them, and a list of the new names, together with Latin and English indexes. By an Apothecary. 8vo, London.

Practical hints on Opium considered as a poison. By R. Hamilton, M. D. 8vo, Ipswich.

Thoughts, physiological, pathological and practical,

practical, with some cases and anatomico-practical observations. By Allan Swainston, M. D. 8vo, York.

An essay on fevers; wherein their theoretic genera, species, and various denominations, are, from observation and experience of thirty years, in Europe, Africa and America, and the intermediate seas, reduced to their characteristic genus, febrile infection, and the cure established on philosophical induction. By Robert Robertson, M. D. a Surgeon of his Majesty's Navy. 8vo, London.

On the principle of vitality, a discourse delivered in the first church of Boston, before the Humane Society of the commonwealth of Massachusetts. By B. Waterhouse, M. D. Professor of the Theory and Practice of Physic in the University of Cambridge, New England. 4to, Boston.

A treatise on the inoculation of horses for the Strangles, in which is clearly laid down the manner and time of the operation, the preparation necessary previous thereto, and the mode of treatment during the continuance of the disorder; the whole being the result of long

VOL. VI. DEC. II. E e experience.

experience. By Richard Ford, of Birmingham. 12mo, Birmingham.

Observations on animal life and apparent death from accidental suspension of the function of the lungs; with remarks on the Brunonian system of Medicine. By J. Franks. 8vo, London.

An essay on a non-descript, or newly invented disease; its nature, causes, and means of relief. With some very important observations on the powerful and most surprising effects of animal magnetism in the cure of the said disease; as communicated to the author by Dr Mesmer, and Madame de L—g. By F. G. Professor of Physic and Astrology. 8vo, London.

Essays on fashionable diseases; the dangerous effects of hot and crowded rooms; the clothing of invalids; Lady and Gentlemen Doctors; and on Quacks and Quackery. With the genuine patent prescriptions of Dr James's fever powder, Tickell's ætherial spirit, and Godbold's balsam. Taken from the Rolls of Chancery, and under the seal of the proper officers. And also the ingredients and composition of many of the most celebrated quack

quack nostrums, as analysed by several of the best chemists in Europe. By James M. Adair, formerly M. D. Member of the Royal Medical Society, Fellow of the Royal College of Physicians of Edinburgh, Physician to the Commander in Chief of the Leeward Islands, and to the Colonial troops; and one of the Judges of the court of King's Bench and Common-pleas in the island of Antigua. 8vo, London.

A candid inquiry into the truth of certain charges, of the dangerous consequences of the Suttonian or cooling regimen under inoculation for the Small-Pox. Recommended to the serious consideration of parents and guardians, as being of the utmost importance to the welfare of the rising generation. With some useful remarks on a successful method, used some years ago in Hungary, in the cure of the natural Small-Pox; and tending to demonstrate the benefit to be expected from a similar method of management under inoculation. By James Makitrick Adair, formerly M. D. &c. 8vo, London.

A treatise on air, containing new experiments and thoughts on combustion, being a full investigation of Mr Lavoisier's system; and

proving, by some striking experiments, its erroneous principles. With strictures on the chemical opinions of some eminent men. By Richard Bewley, M. D. 8vo, London.

A treatise on the plague, containing an historical journal, and medical account, of the plague at Aleppo, in the years 1760, 1761, and 1762. Also remarks on Quarantines, Lazarettos, and the administration of police in times of pestilence. To which is added, an appendix, containing cases of the plague, and an account of the weather during the pestilential season. By Patrick Russell, M. D. F. R. S., formerly Physician to the British Factory at Aleppo. 4to, London.

Experiments and observations on the Angustura Bark. By Augustus Everard Brande, Apothecary to the Queen. 8vo, London.

A treatise on the Fevers of Jamaica, with some observations on the intermittent Fever of America; and an appendix, containing some hints on the means of preserving the health of soldiers in hot climates. By Robert Jackson, M. D. 8vo, London.

A treatise on the extraction of the Cataract. By D. Augustus Gottlieb Richter, M. & Ch. D.
Aulic

Aulic Counsellor and Physician to his Britannic Majesty, Professor of the Practice of Physic and Surgery in the University of Göttingen, President of the College of Surgeons, and Member of the Royal Academies of Göttingen, Stockholm, and Copenhagen. Translated from the German ; with a plate, and notes by the translator. 8vo, London.

Illustration of the Linnæan system. By J. Miller. Vol. 2. Folio, London.

Specimens of grasses, with Linnæan and English names. By G. Swayne, A. M. 4to, London.

Index Ornithologicus. By J. Latham. 2 vols. 4to, London.

The chemical principles of the metallic arts ; with an account of the principal diseases incident to the different artificers, and the means of prevention and cure. By William Richardson, Surgeon. 8vo, London.

The Apothecary's Mirrour, or the present state of Pharmacy exploded. 8vo, London.

A treatise on the Dropsy of the Brain. By W. Quin, M. D. 8vo, London.

Medical advice to the inhabitants of warm climates.

climates. By R. Thomas, Surgeon. 8vo, London.

A system of Midwifery, from the French of Boudelocque. By J. Heath; with plates. 3 vols. 8vo, London.

The annual oration, delivered, March 8th 1790, before the Medical Society of London. By G. Wallis, M. D. 8vo, London.

An essay on the Scurvy. By F. Thomson. 8vo, London.

A system of animal magnetism. 4to, London.

Animal magnetism examined. By J. Martin. 8vo, London.

The Gentleman's stable directory. Vol. 2. By William Taplin. 8vo, London.

The anatomical Instructor, or method of preserving the different parts of the body. By T. Pole. 8vo, London.

Nouveau memoire à consulter sur la maladie de Marie-Anne Semennin, soignée à l'hôpital des Bourgeois de Strasbourg, et de présent aux eaux de Baden-Baden. Par M. Laurent, M. D. 8vo, Strasbourg.

Histoire abrégée de la Lithotomie. Par M. Saucerotte, maître en chirurgie gradué, associé

associé de l'Académie Royale de Chirurgie de Paris, &c. 8vo, Nanci.

Journal de chirurgie. Par M. Default, chirurgien en chef de l'Hôtel-Dieu de Paris. Tom. 1. 8vo, Paris.

Instructions populaires, concernant les maladies les plus fréquentes de chevaux, de vaches, et de moutons. Par M. Crachet de Niellez-Blequin en Artois. 8vo, Paris.

Mémoire sur la possibilité de d'améliorer les chevaux en France, et plan d'association, ayant cette amélioration pour objet; ouvrage approuvé par la Société Royale d'Agriculture. Par M. Flandrin, directeur-adjoint de l'école royale vétérinaire d'Alfort. 8vo, Paris.

Histoire et mémoires de la Société des Sciences physiques de Lausanne. Tom. 3. avec figures. 4to, Lausanne.

Cours de chirurgie pratique sur la maladie venerienne à l'usage des élèves en chirurgie. Par C. A. Dombard, maître en chirurgie de la ville de Dolle. 8vo, Strasbourg.

Mémoire sur la manière dont se forment les pierres dans le corps humain, et sur le moyens de les dissoudre. Par M. l'Estrade,

Médecin du Roi à Saint-Pierre. 8vo, Saint-Pierre, Martinique.

Tableau encyclopedique et methodique des trois regnes de la nature, dedié et présenté à M. Neckar. Par M. l'Abbe Bonnaterre. 4to, Paris.

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